

Access DB# 89656

# SEARCH REQUEST FORM

Scientific and Technical Information Center

Requester's Full Name: Blessing Fubara Examiner #: 77687 Date: 3-22-03  
A# Unit: 1615 Phone Number 308-8374 Serial Number: 10/056923  
Mail Box and Bldg/Room Location: CM 2 B11 Results Format Preferred (circle): PAPER DISK E-MAIL

2801 If more than one search is submitted, please prioritize searches in order of need. MEY'

\*\*\*\*\*  
Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: Thickened Cosmetic Composition

Inventors (please provide full names): Alan Joseph Suarez  
Joanna Hong Zhang

Earliest Priority Filing Date: \_\_\_\_\_

*\*For Sequence Searches Only\* Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.*

Composition comprises alpha-hydroxy or beta-hydroxy <sup>carboxylic</sup> acid and at least a salt of the carboxylic acid and the taurate copolymer.

Clms are attached.

Thanks [Signature]

Point of Contact  
Mona Smith  
Technical Information Specialist  
CM1 6A01  
Tel: 308-3278

STAFF USE ONLY		Type of Search	Vendors and cost where applicable
Searcher: <u>Al. S.M. TA</u>	NA Sequence (#) _____	STN _____	
Searcher Phone #: _____	AA Sequence (#) _____	Dialog _____	
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Date Searcher Picked Up: <u>3/23/03</u>	Bibliographic <u>X</u>	Dr.Link _____	
Date Completed: <u>3/31/03</u>	Litigation _____	Lexis/Nexis _____	
Searcher Prep & Review Time: <u>50</u>	Fulltext _____	Sequence Systems _____	
Clerical Prep Time: _____	Patent Family _____	WWW/Internet _____	
Online Time: <u>1-0</u>	Other _____	Other (specify) _____	

Day : Saturday  
Date: 3/22/2003

Time: 17:01:58

 **PALM INTRANET**

## Correspondence Address for 10/056923

Customer Number	Contact Information	Address
00201	Telephone: (201)943-7100 Fax: No Fax # E-Mail: No E-Mail Address	UNILEVER PATENT DEPARTMENT 45 RIVER ROAD EDGEWATER NJ 07020

Appln Info	Contents	Petition Info	Atty/Agent Info	Continuity Data	Foreign
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Search Another: Application# or Patent# 

PCT /

/ 

or PG PUBS #

Attorney Docket #

Bar Code #

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# WEST Search History

DATE: Saturday, March 22, 2003

**Set Name Query**

side by side

**Hit Count Set Name**

result set

*DB=USPT,PGPB,JPAB,EPAB,DWPI; PLUR=YES; OP=ADJ*

L14	L13 and l6	9	L14
L13	L12 and copolymer and vinylpyrrolidone	94	L13
L12	acrylamido-2-methylpropanesulphonic acid	193	L12
L11	ammonium acryloyldimethyltaurate/vp copolymer	0	L11
L10	us-5863545\$.did.	2	L10
L9	aristoflex adj2 AVC!	6	L9
L8	aristoflex aadj2 AVC!	0	L8
L7	L6 and l5	15	L7
L6	lactic acid or glycolic acid or 2-hydroxyoctanoic acid	52846	L6
L5	aristoflex	70	L5
L4	acryloyldimethyl taurate	8	L4
L3	acryloldimethyl taurate	0	L3
L2	acryloldimethyl	0	L2
L1	us-5863545\$.did.	2	L1

END OF SEARCH HISTORY

## Patent Assignment Abstract of Title

**Total Assignments: 1**

**Applicati n #:** 10056923   **Filing Dt:** 01/24/2002   **Patent #:** NONE   **Issue Dt:**  
**PCT #:** NONE   **Publicati n #:** NONE   **Pub Dt:**  
**Inventors:** Alan Joseph Soares, Joanna Hong Zhang  
**Title:** Thickened cosmetic compositions

**Assignment: 1**

<b>Reel/Frame:</b> <u>012710/0054</u>	<b>Received:</b> 03/27/2002	<b>Recorded:</b> 03/18/2002	<b>Mailed:</b> 05/20/2002	<b>Pages:</b> 3
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**Conveyance:** ASSIGNMENT OF ASSIGNORS INTEREST (SEE DOCUMENT FOR DETAILS).

**Assignors:** SUARES, ALAN JOSEPH   **Exec Dt:** 01/17/2002  
ZHANG, JOANNA HONG   **Exec Dt:** 01/17/2002

**Assignee:** UNILEVER HOME & PERSONAL CARE USA, DIVISION OF CONOPCO, INC.  
33 BENEDICT PLACE  
GREENWICH, CONNECTICUT 06830

**Correspondent:** UNILEVER PATENT DEPARTMENT  
MILTON L. HONIG  
45 RIVER ROAD  
EDGEWATER, NEW JERSEY 07020

Search Results as of: 3/22/2003 5:01:48 P.M.

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If you have any comments or questions concerning the data displayed, contact OPR / Assignments at 703-308-9723  
Web interface last modified: Oct. 5, 2002

## WEST

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## Search Results - Record(s) 1 through 8 of 8 returned.

☐ 1. Document ID: JP 2002205915 A

L4: Entry 1 of 8

File: JPAB

Jul 23, 2002

PUB-NO: JP02002205915A

DOCUMENT-IDENTIFIER: JP 2002205915 A

TITLE: ACID COSMETIC, PHARMACEUTICAL AND DERMATOLOGICAL AGENTS

PUBN-DATE: July 23, 2002

## INVENTOR-INFORMATION:

NAME

COUNTRY

LOEFFLER, MATTHIAS DR

MORSCHHAEUSER, ROMAN

INT-CL (IPC): A61 K 7/00; A61 K 7/075; A61 K 7/48; A61 K 7/50; A61 K 9/06; A61 K 9/107; A61 K 47/02; A61 K 47/12; A61 K 47/20; A61 K 47/30; A61 P 17/00; C08 F 2/04; C08 F 2/44; C08 F 20/58; C08 F 290/00; C08 F 291/00; C08 K 5/09; C08 K 5/13; C08 K 5/42; C08 L 33/26

## ABSTRACT:

PROBLEM TO BE SOLVED: To obtain acid cosmetic, pharmaceutical and dermatological agents capable of ameliorating retention of stability of various emulsions.

SOLUTION: The acid cosmetic, pharmaceutical and dermatological agents contain at least one copolymer, obtainable by radical copolymerization of (A) acryloyldimethyl taurine acid and/or acryloyldimethyl taurates, (B) optionally one or more other olefinically unsaturated, non-cationic comonomers, (C) optionally one or more olefinically unsaturated, cationic comonomers, (D) optionally one or more silicon-containing component(S), (E) optionally one or more fluorine- containing component(s), (F) optionally one or more macromonomers, (G) copolymerization optionally proceeding in the presence of at least one polymer additive, (H) with the proviso that the component (A) is copolymerized with at least one component selected from groups (D) to (G).

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Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	INMC	Draw Deso	Image
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☐ 2. Document ID: JP 2002201111 A

L4: Entry 2 of 8

File: JPAB

Jul 16, 2002

PUB-NO: JP02002201111A

DOCUMENT-IDENTIFIER: JP 2002201111 A

TITLE: SURFACTANT-FREE COSMETIC, DERMATOLOGICAL AND PHARMACEUTICAL AGENT

PUBN-DATE: July 16, 2002

## INVENTOR-INFORMATION:

## NAME

## COUNTRY

LOEFFLER, MATTHIAS DR  
MORSCHHAEUSER, ROMAN

INT-CL (IPC): A61 K 7/00; A61 K 7/48; A61 K 9/08; A61 K 9/10; A61 K 47/08; A61 K 47/10; A61 K 47/12; A61 K 47/14; A61 K 47/30; A61 K 47/32; A61 K 47/34; A61 K 47/44

## ABSTRACT:

PROBLEM TO BE SOLVED: To obtain a surfactant-free cosmetic, a pharmaceutical and a dermatological agents comprising a comb type copolymer consisting essentially of acryloyldimethyl taurine acid.

SOLUTION: The surfactant-free cosmetic, the pharmaceutical and the dermatological agents are characterized in that they comprise at least one kind of a copolymer obtained by a radical copolymerization of (A) acryloyldimethyltaurine acid and/or acryloyldimethyl taurate, (B) optionally one or more olefinically unsaturated, non-cationic comonomer, (C) optionally one or more olefinic unsaturated, cationic comonomer, (D) optionally one or more silicon-containing components, (E) optionally one or more fluorine- containing components and (F) optionally one or more macromonomers, (G) the copolymerization optionally proceeding in the presence of at least one polymer additive, (H) with the proviso that the component (A) is copolymerized with at least one component selected from one of the groups (D) to (G).

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Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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☐ 3. Document ID: WO 244271 A2

L4: Entry 3 of 8

File: EPAB

Jun 6, 2002

PUB-NO: WO000244271A2

DOCUMENT-IDENTIFIER: WO 244271 A2

TITLE: SURFACTANT-CONTAINING COSMETIC, DERMATOLOGICAL AND PHARMACEUTICAL AGENTS

PUBN-DATE: June 6, 2002

## INVENTOR-INFORMATION:

## NAME

LOEFFLER, MATTHIAS  
MORSCHHAEUSER, ROMAN  
KAYSER, CHRISTOPH

## COUNTRY

DE  
DE  
DE

INT-CL (IPC): C08 L 51/00; A61 K 7/48; C08 F 291/00; C08 F 265/04; C08 F 271/02

## ABSTRACT:

CHG DATE=20020702 STATUS=O>The invention relates to surfactant-containing cosmetic, dermatological and pharmaceutical agents that contain at least one water-soluble or water-swellable copolymer, obtainable by radical copolymerization of A) acryloyldimethyl taurine acid and/or acryloyldimethyl taurates, B) optionally one or more other olefinically unsaturated, non-cationic comonomers, C) optionally one or more olefinically unsaturated, cationic comonomers, D) optionally one or more silicon-containing component(s), E) optionally one or more fluorine-containing component(s), F) optionally one or more macromonomers, G) copolymerization optionally proceeding in the presence of at least one polymer additive, H) with the proviso that component A) is copolymerized with at least one component selected from groups D) to G).

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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☐ 4. Document ID: WO 244231 A1

L4: Entry 4 of 8

File: EPAB

Jun 6, 2002

PUB-NO: WO000244231A1

DOCUMENT-IDENTIFIER: WO 244231 A1

TITLE: SURFACTANT-FREE COSMETIC, DERMATOLOGICAL AND PHARMACEUTICAL AGENTS

PUBN-DATE: June 6, 2002

## INVENTOR-INFORMATION:

NAME

COUNTRY

LOEFFLER, MATTHIAS

DE

MORSCHHAEUSER, ROMAN

DE

INT-CL (IPC): C08 F 291/00; A61 K 7/48; A61 K 7/06; C08 F 290/06; C08 L 51/00; C08 F 2/00

EUR-CL (EPC): C08F265/04; C08F290/06, C08F291/00 , C08L051/00

## ABSTRACT:

The invention relates to surfactant-free cosmetic, dermatological and pharmaceutical agents that contain at least one copolymer, obtainable by radical copolymerization of A) acryloyldimethyl taurine acid and/or acryloyldimethyl taurates, B) optionally one or more other olefinically unsaturated, non-cationic comonomers, C) optionally one or more olefinically unsaturated, cationic comonomers, D) optionally one or more silicon-containing component(s), E) optionally one or more fluorine-containing component(s), F) optionally one or more macromonomers, G) copolymerization optionally proceeding in the presence of at least one polymer additive, H) with the proviso that component A) is copolymerized with at least one component selected from groups D) to G).

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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☐ 5. Document ID: WO 243686 A2

L4: Entry 5 of 8

File: EPAB

Jun 6, 2002

PUB-NO: WO000243686A2

DOCUMENT-IDENTIFIER: WO 243686 A2

TITLE: ACID COSMETIC, DERMATOLOGICAL AND PHARMACEUTICAL AGENTS

PUBN-DATE: June 6, 2002

## INVENTOR-INFORMATION:

NAME

COUNTRY

LOEFFLER, MATTHIAS

DE

MORSCHHAEUSER, ROMAN

DE

INT-CL (IPC): A61 K 7/48

EUR-CL (EPC): A61K007/48; A61K007/06

## ABSTRACT:

The invention relates to acid cosmetic, dermatological and pharmaceutical agents that contain at least one copolymer, obtainable by radical copolymerization of A) acryloyldimethyl taurine acid and/or acryloyldimethyl taurates, B) optionally one or more other olefinically unsaturated, non-cationic comonomers, C) optionally one or more olefinically unsaturated, cationic comonomers, D) optionally one or more silicon-containing component(s), E) optionally one or more fluorine-containing component(s), F) optionally one or more macromonomers, G) copolymerization optionally proceeding in the presence of at least one polymer additive, H) with the proviso that component A) is copolymerized with at least one component selected from groups D) to G).

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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☐ 6. Document ID: US 20020155076 A1 EP 1216686 A2 DE 10065047 A1 JP 2002212022 A

L4: Entry 6 of 8

File: DWPI

Oct 24, 2002

DERWENT-ACC-NO: 2002-699822

DERWENT-WEEK: 200277

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TITLE: Cosmetic or dermatological gel cream, useful particularly for eye shadow, includes an ammonium acryloyldimethyl taurate-vinyl pyrrolidone copolymer

INVENTOR: HARGENS, B; KROEPKE, R ; LANZENDOERFER, G ; NIELSEN, J ; RIDEL, H ; VON THADEN, S ; RIEDEL, H ; KROPKE, R ; LANZENDORFER, G

PRIORITY-DATA: 2000DE-1065047 (December 23, 2000)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
US 20020155076 A1	October 24, 2002		000	A61K007/21
EP 1216686 A2	June 26, 2002	G	017	A61K007/032
DE 10065047 A1	July 4, 2002		000	A61K007/00
JP 2002212022 A	July 31, 2002		018	A61K007/00

INT-CL (IPC): A61 K 7/00; A61 K 7/021; A61 K 7/032; A61 K 7/21; A61 K 7/48; A61 K 9/06; A61 P 17/00; A61 P 17/16

ABSTRACTED-PUB-NO: EP 1216686A

BASIC-ABSTRACT:

NOVELTY - Cosmetic or dermatological gel cream (A) of the oil-in-water type comprises up to 90 wt.% of aqueous phase, up to 20 wt.% of lipid phase, up to 5 wt.% of at least one emulsifier and up to 5 wt.% of at least one ammonium acryloyldimethyl taurate-vinyl pyrrolidone copolymer (I).

USE - (A) is useful as a carrier for cosmetic or dermatological ingredients, specifically pigments for use as eye shadow, but more generally for e.g. lip salves; deodorants; make-up; hair- and skin-care products.

ADVANTAGE - Compared with known gel creams, (A) has better moisturizing, skin-smoothing, sensory and biocompatibility properties, has improved stability against phase separation, and is easier to formulate.

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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☐ 7. Document ID: US 20020176832 A1 EP 1216695 A2 DE 10065046 A1 JP 2002212025 A

L4: Entry 7 of 8

File: DWPI

Nov 28, 2002

DERWENT-ACC-NO: 2002-692951

DERWENT-WEEK: 200281

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TITLE: Cosmetic or dermatological oil-in-water emulsion, useful in e.g. hair- and skin-care products, includes an ammonium acryloyldimethyl taurate-vinyl pyrrolidone copolymer

INVENTOR: BORMANN, A; HARGENS, B ; LANZENZDOERFER, G ; NIELSEN, J ; RIEDEL, H ; VON THADEN, S ; LANZENDOERFER, G ; LANZENDORFER, G

PRIORITY-DATA: 2000DE-1065046 (December 23, 2000)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
US 20020176832 A1	November 28, 2002		000	A61K007/21
EP 1216695 A2	June 26, 2002	G	020	A61K007/48
DE 10065046 A1	July 4, 2002		000	A61K007/00
JP 2002212025 A	July 31, 2002		019	A61K007/00

INT-CL (IPC): A61 K 7/00; A61 K 7/02; A61 K 7/021; A61 K 7/032; A61 K 7/21; A61 K 7/48; A61 K 47/32

ABSTRACTED-PUB-NO: EP 1216695A

BASIC-ABSTRACT:

NOVELTY - Cosmetic or dermatological oil-in-water emulsion (A) comprises up to 90 wt.% of aqueous phase; up to 40 wt.% of lipid phase; up to 10wt.% of at least one emulsifier and up to 5wt.% of at least one ammonium acryloyldimethyl taurate- vinyl pyrrolidone copolymer (I).

USE - (A) is useful as a carrier for e.g. cosmetic or dermatological ingredients, for lip salves; deodorants; make-up; hair- and skin-care products.

ADVANTAGE - Compared with known compositions, (A) has better moisturizing, skin-smoothing, sensory and biocompatibility properties, has improved stability against phase separation, and is easier to formulate.

Full Title Citation Front Review Classification Date Reference Sequences Attachments

Table Draw Desc Image

☐ 8. Document ID: EP 1216693 A1 DE 10065044 A1

L4: Entry 8 of 8

File: DWPI

Jun 26, 2002

DERWENT-ACC-NO: 2002-692950

DERWENT-WEEK: 200275

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TITLE: Gel-based eye shadow, contains an ammonium acryloyldimethyl taurate-vinyl pyrrolidone copolymer and at least one pigment or dye

INVENTOR: BORMANN, A; LANZENDOERFER, G

PRIORITY-DATA: 2000DE-1065044 (December 23, 2000)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
EP 1216693 A1	June 26, 2002	G	017	A61K007/48
DE 10065044 A1	July 4, 2002		000	A61K007/032

INT-CL (IPC): A61 K 7/032; A61 K 7/48

ABSTRACTED-PUB-NO: EP 1216693A

BASIC-ABSTRACT:

NOVELTY - Gel-based eye shadow (A) contains at least one ammonium acryloyldimethyl taurate-vinyl pyrrolidone copolymer (I) and one or more dyes and/or colored pigments (II).

USE - The compositions are useful as eye shadow.

ADVANTAGE - Compared with known compositions, (A) has better sensory and biocompatibility properties, improved stability, and better color shadowing, even at low application rates.

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	LMC	Draw Desc	Image
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Term	Documents
ACRYLOYLDIMETHYL.DWPI,EPAB,JPAB,USPT,PGPB.	15
ACRYLOYLDIMETHYLS	0
TAURATE.DWPI,EPAB,JPAB,USPT,PGPB.	1572
TAURATES.DWPI,EPAB,JPAB,USPT,PGPB.	1961
(ACRYLOYLDIMETHYL ADJ TAURATE).USPT,PGPB,JPAB,EPAB,DWPI.	8
(ACRYLOYLDIMETHYL TAURATE).USPT,PGPB,JPAB,EPAB,DWPI.	8

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**WEST**[Generate Collection](#)[Print](#)**Search Results - Record(s) 1 through 15 of 15 returned.**☐ 1. Document ID: US 20020176832 A1

L7: Entry 1 of 15

File: PGPB

Nov 28, 2002

PGPUB-DOCUMENT-NUMBER: 20020176832  
PGPUB-FILING-TYPE: new  
DOCUMENT-IDENTIFIER: US 20020176832 A1

TITLE: O/W emulsions containing one or more ammonium acryloyldimethyltaurate/vinylpyrrolidone copolymers

PUBLICATION-DATE: November 28, 2002

## INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Lanzendorfer, Ghita	Hamburg		DE	
Bormann, Angelika	Hamburg		DE	
Nielsen, Jens	Henstedt-Ulzburg		DE	
Hargens, Birgit	Hamburg		DE	
Riedel, Heidi	Hamburg		DE	
von Thaden, Stephanie	Hamburg		DE	

US-CL-CURRENT: 424/63

## ABSTRACT:

Cosmetic or dermatological gel creams of the oil-in-water type, comprising

(i) up to 90% by weight of a water phase,

(ii) up to 20% by weight of a lipid phase, based on the total weight of the preparations,

(iii) up to 5% by weight of one or more emulsifiers,

(iv) also comprising up to 5% by weight of one or more ammonium acryloyldimethyltaurates/vinylpyrrolidone copolymers.

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KNIC	Draw Desc	Image
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☐ 2. Document ID: US 20020155076 A1

L7: Entry 2 of 15

File: PGPB

Oct 24, 2002

PGPUB-DOCUMENT-NUMBER: 20020155076  
PGPUB-FILING-TYPE: new  
DOCUMENT-IDENTIFIER: US 20020155076 A1

TITLE: Gel creams in the form of O/W emulsions containing one or more ammonium acryloyldimethyltaurate/vinylpyrrolidone copolymers

PUBLICATION-DATE: October 24, 2002

## INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Lanzendorfer, Ghita	Hamburg		DE	
Nielsen, Jens	Henstedt-Ulzburg		DE	
Hargens, Birgit	Hamburg		DE	
Kropke, Rainer	Schenefeld		DE	
Riedel, Heidi	Hamburg		DE	
von Thaden, Stephanie	Hamburg		DE	

US-CL-CURRENT: 424/63

## ABSTRACT:

Cosmetic or dermatological gel creams of the oil-in-water type, comprising

(i) up to 90% by weight of a water phase,

(ii) up to 20% by weight of a lipid phase, based on the total weight of the preparations,

(iii) up to 5% by weight of one or more emulsifiers,

(iv) also comprising up to 5% by weight of one or more ammonium acryloyldimethyl-taurates/vinylpyrrolidone copolymers.

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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☐ 3. Document ID: US 20020058055 A1

L7: Entry 3 of 15

File: PGPB

May 16, 2002

PGPUB-DOCUMENT-NUMBER: 20020058055

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20020058055 A1

TITLE: Gelled aqueous cosmetic compositions

PUBLICATION-DATE: May 16, 2002

## INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Zecchino, Jules	Closter	NJ	US	
Matathia, Michelle	Syosset	NJ	US	
Knight, E. Althea	Teaneck	NJ	US	
Harrison, James T.	Forest Hills	NY	US	

US-CL-CURRENT: 424/401; 424/486

## ABSTRACT:

The invention relates to cosmetic or pharmaceutical composition comprising an oil-containing biliquid foam dispersed in a salt-containing aqueous phase, in which the aqueous phase, having a pH of less than about 7, is gelled by a polymeric sulfonic acid. A particularly preferred gellant is ammonium poly(acryldimethyltauramide-co-vinylformamide). Unlike many other types of gels, these

gels are stable at an acid pH in the presence of substantial amounts of electrolytes, and therefore are useful in delivering acidic active components.

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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KMC	Draw Desc	Image
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☐ 4. Document ID: US 6294186 B1

L7: Entry 4 of 15

File: USPT

Sep 25, 2001

US-PAT-NO: 6294186

DOCUMENT-IDENTIFIER: US 6294186 B1

TITLE: Antimicrobial compositions comprising a benzoic acid analog and a metal salt

DATE-ISSUED: September 25, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Beerse; Peter William	Cincinnati	OH	45253-8707	
Biedermann; Kimberly Ann	Cincinnati	OH	45253-8707	
Page; Steven Hardy	Cincinnati	OH	45253-8707	
Mobley; Michael Joseph	Cincinnati	OH	45253-8707	
Morgan; Jeffrey Michael	Cincinnati	OH	45253-8707	

US-CL-CURRENT: 424/405; 424/401, 514/156, 514/162, 514/859

ABSTRACT:

The present invention relates to antimicrobial compositions which provide enhanced immediate as well as residual anti-viral and antibacterial efficacy. The antimicrobial compositions of the present invention provide previously unseen residual effectiveness against Gram negative bacteria, Gram positive bacteria, and viruses, fungi, and improved immediate germ reduction upon use. These compositions comprise: a) a safe and effective amount of a benzoic acid analog; b) a safe and effective amount of a metal salt; and c) a dermatologically acceptable carrier for the acid and salt wherein said composition has a pH of from about 1 to about 7. The invention further relates to methods of use for the present compositions as well as antimicrobial products which incorporate the compositions.

49 Claims, 0 Drawing figures

Exemplary Claim Number: 1

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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KMC	Draw Desc	Image
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☐ 5. Document ID: US 6264929 B1

L7: Entry 5 of 15

File: USPT

Jul 24, 2001

US-PAT-NO: 6264929

DOCUMENT-IDENTIFIER: US 6264929 B1

TITLE: Hair treatment compositions containing fluorinated acids and polymers

DATE-ISSUED: July 24, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Karlen; Thomas	Bern			CH
Chambettaz; Daniel	Ursen			CH

US-CL-CURRENT: 424/70.1; 424/400, 424/401, 424/70.22, 424/70.24

## ABSTRACT:

Compositions for treating hair prepared using fluorinated acids to neutralize polymers with basic groups are described, which contain a complex formed from at least one fluorinated acid and at least one polymer with basic groups or a complex of a salt of a fluorinated acid and a polymer with protonated or quaternized amine groups, and which also contain at least one film-forming, hair-fixing polymer. These compositions deposit a reduced amount of residue on the hair without reducing the hair-fixing performance.

14 Claims, 0 Drawing figures  
Exemplary Claim Number: 1

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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NAME	Draw Desc	Image
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☐ 6. Document ID: US 6022559 A

L7: Entry 6 of 15

File: USPT

Feb 8, 2000

US-PAT-NO: 6022559

DOCUMENT-IDENTIFIER: US 6022559 A

TITLE: Aqueous dispersion of dehydration-resistant vesicles

DATE-ISSUED: February 8, 2000

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Simonnet; Jean-Thierry	Paris			FR

US-CL-CURRENT: 424/450; 424/401, 424/455, 424/461, 424/70.1, 424/70.11, 424/70.12, 424/70.13, 424/70.15, 424/70.16, 424/70.21, 424/70.22

## ABSTRACT:

A dispersion, in an aqueous medium, of dehydration-resistant vesicles containing a lipid phase and an encapsulated aqueous phase. The dispersion additionally contains, either in the aqueous medium or in the encapsulated aqueous phase or in both, at least one polymer, in the form of particles, which has a glass transition temperature  $T_g$ , in the presence or absence of a plasticizing agent, of lower than 70.degree. C. at 0% relative humidity. The dispersion can be used in the cosmetic or pharmaceutical fields for topical application for the care and/or makeup of the skin and for care of the scalp and/or hair.

24 Claims, 0 Drawing figures  
Exemplary Claim Number: 1

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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NAME	Draw Desc	Image
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☐ 7. Document ID: US 5900229 A

L7: Entry 7 of 15

File: USPT

May 4, 1999

US-PAT-NO: 5900229

DOCUMENT-IDENTIFIER: US 5900229 A

TITLE: Use of a vinyl lactam-derived terpolymer as a foaming agent in compositions forming an aerosol foam

DATE-ISSUED: May 4, 1999

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Dupuis; Christine	Paris			FR

US-CL-CURRENT: 424/47; 132/202, 424/45, 424/70.11, 424/70.15, 424/70.16, 424/70.9, 424/78.02, 424/DIG.1, 424/DIG.2, 514/945, 514/957

## ABSTRACT:

The invention relates to the use as sole or additional foaming agent in aqueous compositions for treating the skin or the hair, which are packaged in an aerosol device and are capable of forming a foam after expansion into the air, of a terpolymer consisting of 25 to 90% of vinyl lactam, of 1 to 55% of unsaturated carboxylic acid and of 1 to 20% of alkyl acrylate or methacrylate containing at least 6 carbon atoms, and to cosmetic or dermatological compositions packaged as an aerosol and forming a foam in the air, containing the terpolymer.

24 Claims, 0 Drawing figures

Exemplary Claim Number: 1

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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Full	Draw Desc	Image
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☐ 8. Document ID: US 5756077 A

L7: Entry 8 of 15

File: USPT

May 26, 1998

US-PAT-NO: 5756077

DOCUMENT-IDENTIFIER: US 5756077 A

TITLE: Hair protectant composition and process for preserving chemically processed hair during subsequent chemical processing

DATE-ISSUED: May 26, 1998

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Syed; Ali N.	Inverness	IL		
Habib; Wagdi W.	Barrington	IL		

US-CL-CURRENT: 424/70.13

## ABSTRACT:

A method for protecting previously chemically processed hair fibers from damage during subsequent chemical processing comprising the steps of: (a) applying to the previously processed hair fibers a protectorant composition comprising (i) a sugar; a starch hydrolysate, sorbitol, glycerol, propylene glycol, or a polyol, and (ii) and at least one cationic or non-ionic polar polymer; and thereafter, (b) processing the hair fibers with the same chemical process previously used; and thereafter (c) rinsing the

hair for a time sufficient to remove all chemicals from the hair. Also claimed is a composition for protecting previously chemically treated hair and a kit for processing previously processed hair using the compositions of the invention.

26 Claims, 0 Drawing figures  
Exemplary Claim Number: 1

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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NAME	Draw Desc	Image
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❑ 9. Document ID: US 5194260 A

L7: Entry 9 of 15

File: USPT

Mar 16, 1993

US-PAT-NO: 5194260  
DOCUMENT-IDENTIFIER: US 5194260 A

TITLE: Cosmetic composition for the hair contains a film forming polymer and a silicone incorporated in a wax microdispersion and a cosmetic treatment using the same

DATE-ISSUED: March 16, 1993

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Grollier; Jean-Francois	Paris			FR
Rellet; Isabelle	Paris			FR
Peritz; Lyonel	Saint-Cloud			FR

US-CL-CURRENT: 424/401; 424/70.12, 424/70.22, 424/DIG.2

ABSTRACT:

A cosmetic composition for the hair contains at least one film forming polymer and at least one silicone incorporated into a support consisting essentially of a wax microdispersion in an aqueous liquid vehicle. The dispersed phase of this vehicle is a stable microdispersion of particles having a size lower than 500 nm. The particles consist essentially of a wax or mixture of waxes having a final melting point greater than 60.degree. C. and lower than 100.degree. C. which is capable of forming a microdispersion as defined above. The composition contains from 0.1 to 40 weight percent of wax and a sufficient amount of at least one emulsifying agent. A process for the cosmetic treatment of the hair involves applying the above-defined composition to the hair.

13 Claims, 0 Drawing figures  
Exemplary Claim Number: 1

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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NAME	Draw Desc	Image
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❑ 10. Document ID: US 5009880 A

L7: Entry 10 of 15

File: USPT

Apr 23, 1991

US-PAT-NO: 5009880  
DOCUMENT-IDENTIFIER: US 5009880 A

TITLE: Composition and process for the treatment of keratin materials with polymers

DATE-ISSUED: April 23, 1991



## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Grollier; Jean-Francois	Paris			FR
Fiquet; Claire	Paris			FR
Fourcadier; Chantal	Paris			FR
Dubief; Claude	Versailles			FR
Cauwet; Daniele	Crosne			FR

US-CL-CURRENT: 424/47; 424/61, 424/70.13, 424/70.15, 424/70.17, 424/70.28, 424/70.31,  
424/73, 424/DIG.1, 8/406, 8/407

## ABSTRACT:

New compositions for the treatment of keratin material, in particular human hair, skin and nails are provided comprising a combination of a cationic polymer with an anionic polymer. Surprisingly the anionic polymer can be retained well on the hair, even after rinsing, when applied with the cationic polymer.

14 Claims, 0 Drawing figures  
Exemplary Claim Number: 1

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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INAC	Draw Desc	Image
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☐ 11. Document ID: US 4761273 A

L7: Entry 11 of 15

File: USPT

Aug 2, 1988

US-PAT-NO: 4761273

DOCUMENT-IDENTIFIER: US 4761273 A

TITLE: Composition in the form of an aerosol foam, based on a cationic polymer and an anionic polymer

DATE-ISSUED: August 2, 1988

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Grollier; Jean F.	Paris			FR
Madrange; Annie	Saint Germain en Laye			FR
Chailley; Michele	Fontenay sous Bois			FR

US-CL-CURRENT: 424/47; 424/70.11, 424/70.13, 424/70.15, 424/70.16, 424/70.17

## ABSTRACT:

The invention provides a pressurized composition based on cationic and anionic polymers and containing at least one cationic polymer and/or one anionic polymer which foams in aqueous solution, in an aqueous solvent medium such that, in the atmosphere, the composition forms an unstable foam on contact with the hair.

39 Claims, 0 Drawing figures  
Exemplary Claim Number: 1

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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INAC	Draw Desc	Image
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☐ 12. Document ID: US 4719099 A

L7: Entry 12 of 15

File: USPT

Jan 12, 1988

US-PAT-NO: 4719099

DOCUMENT-IDENTIFIER: US 4719099 A

TITLE: Composition and process for the treatment of keratin materials with polymers

DATE-ISSUED: January 12, 1988

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Grollier; Jean-Francois	Paris			FR
Fiquet; Claire	Paris			FR
Fourcadier; Chantal	Paris			FR
Dubief; Claude	Versailles			FR
Cauwet; Daniele	Crosne			FR

US-CL-CURRENT: 424/47; 424/61, 424/70.11, 424/70.15, 424/70.16, 424/70.17, 424/70.28,  
424/73, 424/DIG.1, 8/406, 8/407

## ABSTRACT:

New compositions for the treatment of keratin material, in particular human hair, skin and nails are provided comprising a combination of a cationic polymer with an anionic polymer. Surprisingly the anionic polymer can be retained well on the hair, even after rinsing, when applied with the cationic polymer.

28 Claims, 0 Drawing figures

Exemplary Claim Number: 1

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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Chem	Draw Desc	Image
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☐ 13. Document ID: US 4668508 A

L7: Entry 13 of 15

File: USPT

May 26, 1987

US-PAT-NO: 4668508

DOCUMENT-IDENTIFIER: US 4668508 A

TITLE: Composition for the hair, containing at least one cationic polymer, one anionic polymer, one sugar and one salt

DATE-ISSUED: May 26, 1987

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Grollier; Jean F.	Paris			FR
Fourcadier; Chantal	Paris			FR

US-CL-CURRENT: 424/70.13; 424/70.15, 424/70.16, 424/70.17

## ABSTRACT:

A composition for the hair, which is intended for use in the treatment of keratinous materials, in particular the hair. This composition contains at least one cationic polymer having a molecular weight of between 500 and 3,000,000, at least one anionic polymer having a molecular weight of between 500 and 3,000,000, at least one sugar and

at least one salt in a cosmetically acceptable medium.

12 Claims, 0 Drawing figures  
Exemplary Claim Number: 1

Full Title Citation Front Review Classification Date Reference Sequences Attachments

FWMC Draw Desc Image

☐ 14. Document ID: US 4445521 A

L7: Entry 14 of 15

File: USPT

May 1, 1984

US-PAT-NO: 4445521

DOCUMENT-IDENTIFIER: US 4445521 A

TITLE: Composition and process for the treatment of keratin materials with polymers

DATE-ISSUED: May 1, 1984

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Grollier; Jean-Francois	Paris			FR
Fiquet; Claire	Paris			FR
Fourcadier; Chantal	Paris			FR
Dubief; Claude	Versailles			FR
Cauwet; Daniele	Crosne			FR

US-CL-CURRENT: 132/202, 132/208, 424/47, 424/70.11, 424/70.13, 424/70.15, 424/70.16, 424/70.17, 424/73, 424/DIG.1, 514/781, 8/405, 8/406, 8/407

ABSTRACT:

New compositions for the treatment of keratin material, in particular human hair, skin and nails are provided comprising a combination of a cationic polymer with an anionic polymer. Surprisingly the anionic polymer can be retained well on the hair, even after rinsing, when applied with the cationic polymer.

74 Claims, 0 Drawing figures  
Exemplary Claim Number: 1

Full Title Citation Front Review Classification Date Reference Sequences Attachments

FWMC Draw Desc Image

☐ 15. Document ID: US 4240450 A

L7: Entry 15 of 15

File: USPT

Dec 23, 1980

US-PAT-NO: 4240450

DOCUMENT-IDENTIFIER: US 4240450 A

TITLE: Composition and process for the treatment of keratin materials with polymers

DATE-ISSUED: December 23, 1980

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Grollier; Jean-Francois	Paris			FR
Fiquet; Claire	Paris			FR
Fourcadier; Chantal	Paris			FR
Dubief; Claude	Versailles			FR
Cauwet; Daniele	Crosne			FR

US-CL-CURRENT: 132/209; 424/47, 424/61, 424/70.13, 424/70.15, 424/70.16, 424/70.17,  
424/70.2, 424/73, 424/DIG.1, 424/DIG.2, 8/404, 8/406

**ABSTRACT:**

New compositions for the treatment of keratin material, in particular human hair, skin and nails are provided comprising a combination of a cationic polymer with an anionic polymer. Surprisingly the anionic polymer can be retained well on the hair, even after rinsing, when applied with the cationic polymer.

29 Claims, 0 Drawing figures  
Exemplary Claim Number: 24

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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IMC	Draw Desc	Image
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Term	Documents
(5 AND 6).USPT,PGPB,JPAB,EPAB,DWPI.	15
(L6 AND L5).USPT,PGPB,JPAB,EPAB,DWPI.	15

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(FILE 'HOME' ENTERED AT 18:17:25 ON 22 MAR 2003)

FILE 'REGISTRY' ENTERED AT 18:17:43 ON 22 MAR 2003

L1	15 S TAURATE
L2	0 S TAURATE/CN
L3	0 S TAURIC ACID/CN
L4	0 S TAURIC ACID
L5	0 S ARISTFLEX

FILE 'CAPLUS, USPATFULL' ENTERED AT 18:27:31 ON 22 MAR 2003

L6	17391 S ACRYLOYL
L7	5 S DIMETHYLAURATE
L8	5 DUP REM L7 (0 DUPLICATES REMOVED)

10056923/blessing

L8 ANSWER 2 OF 5 CAPLUS COPYRIGHT 2003 ACS  
AN 2002:486111 CAPLUS  
DN 137:52052  
TI O/W emulsions comprising a copolymer of ammonium acryloyl  
**dimethyltaurate** and vinylpyrrolidone  
IN Lanzendoerfer, Ghita; Bormann, Angelika; Nielsen, Jens; Hargens, Birgit;  
Riedel, Heidi; Von Thaden, Stefanie  
PA Beiersdorf AG, Germany  
SO Eur. Pat. Appl., 20 pp.  
CODEN: EPXXDW  
DT Patent  
LA German  
IC ICM A61K007-48  
ICS A61K047-32; A61K007-021; A61K007-032  
CC 62-4 (Essential Oils and Cosmetics)  
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 1216695	A2	20020626	EP 2001-129936	20011217
	EP 1216695	A3	20020703		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
	DE 10065046	A1	20020704	DE 2000-10065046	20001223
	US 2002176832	A1	20021128	US 2001-25065	20011219
	JP 2002212025	A2	20020731	JP 2001-387732	20011220
PRAI	DE 2000-10065046	A	20001223		

AB The invention concerns cosmetic and dermatol. oil-in-water emulsions that  
contain up-to 90 wt./wt.% water, up-to 40 wt./wt.% lipids, up-to 10  
wt./wt.% emulsifiers and up-to 5 wt./wt.% of at least one ammonium  
acryloyl **dimethyltaurate**/vinyl pyrrolidone copolymer. The  
compsn. further contain dyes; they are used for the prepn. of makeups.  
Thus a compn. contained (wt./wt.%): PEG-30-glycerol stearate 2.50;  
glycerol monostearate 1.00; cetyl alc. 1.00; vaseline 2.50; polyisobutene  
8.00; cyclomethicone 5.00; Aristoflex AVC 0.20; glycerin 5.00; tocopherol  
acetate 1.00; perfume, preservative, sodium hydroxide, dyes, antioxidants  
q.s; water to 100.

ST cosmetics emulsion ammonium acryloyl **dimethyltaurate** vinyl  
pyrrolidone copolymer Aristoflex

IT Emulsifying agents  
(O/W emulsions comprising a copolymer of ammonium acryloyl  
**dimethyltaurate** and vinylpyrrolidone)

IT Lipids, biological studies  
RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
(O/W emulsions comprising a copolymer of ammonium acryloyl  
**dimethyltaurate** and vinylpyrrolidone)

IT Cosmetics  
(makeups; O/W emulsions comprising a copolymer of ammonium acryloyl  
**dimethyltaurate** and vinylpyrrolidone)

IT Emulsions  
(oil-in-water; O/W emulsions comprising a copolymer of ammonium  
acryloyl **dimethyltaurate** and vinylpyrrolidone)

IT 335383-60-3, Aristoflex AVC 438624-48-7  
RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
(O/W emulsions comprising a copolymer of ammonium acryloyl  
**dimethyltaurate** and vinylpyrrolidone)

L8 ANSWER 3 OF 5 CAPLUS COPYRIGHT 2003 ACS  
AN 2002:486104 CAPLUS  
DN 137:52047  
TI Gel-creams of the O/W emulsion type containing ammonium acryloyl  
**dimethyltaurate**/vinyl pyrrolidone copolymers  
IN Lanzendoerfer, Ghita; Nielsen, Jens; Hargens, Birgit; Kroepke, Rainer;

10056923/blessing

Riedel, Heidi; Von Thaden, Stephanie  
PA Beiersdorf Aktiengesellschaft, Germany  
SO Eur. Pat. Appl., 17 pp.  
CODEN: EPXXDW  
DT Patent  
LA German  
IC ICM A61K007-032  
ICS A61K007-48; A61P017-00  
CC 62-4 (Essential Oils and Cosmetics)  
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	----	-----	-----	-----
PI	EP 1216686	A2	20020626	EP 2001-130560	20011221
	EP 1216686	A3	20020717		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
	DE 10065047	A1	20020704	DE 2000-10065047	20001223
	US 2002155076	A1	20021024	US 2001-25062	20011219
	JP 2002212022	A2	20020731	JP 2001-389388	20011221
PRAI	DE 2000-10065047	A	20001223		
AB	The invention concerns cosmetic and dermatol. oil-in-water gel-creams that contain up-to 90 wt./wt.% water, up-to 20 wt./wt.% lipids, up-to 5 wt./wt.% emulsifiers and up-to 5 wt./wt.% of at least one ammonium acryloyl <b>dimethyltaurate</b> /vinyl pyrrolidone copolymer. The compns. further contain dyes; they are used for the prepn. of eye shadows. Thus a hydrodispersion gel contained (wt./wt.%): PEG-8 5.00; ethanol 10.0; Aristoflex AVC 0.70; triglyceride, liq. 1.50; glycerin 5.00; panthenol 0.50; tocopherol acetate 0.50; perfume, preservative, sodium hydroxide, dyes, antioxidants q.s; water to 100.				
ST	hydrogel cosmetics ammonium acryloyl <b>dimethyltaurate</b> vinyl pyrrolidone copolymer Aristoflex; eye shadow cosmetics hydrogel Aristoflex AVC				
IT	Cosmetics (eye shadows; gel-creams of O/W emulsion type contg. ammonium acryloyl <b>dimethyltaurate</b> /vinyl pyrrolidone copolymers)				
IT	Emulsifying agents Hydrogels (gel-creams of O/W emulsion type contg. ammonium acryloyl <b>dimethyltaurate</b> /vinyl pyrrolidone copolymers)				
IT	Glycerides, biological studies Lipids, biological studies RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses) (gel-creams of O/W emulsion type contg. ammonium acryloyl <b>dimethyltaurate</b> /vinyl pyrrolidone copolymers)				
IT	Emulsions (oil-in-water; gel-creams of O/W emulsion type contg. ammonium acryloyl <b>dimethyltaurate</b> /vinyl pyrrolidone copolymers)				
IT	335383-60-3, Aristoflex AVC 438624-48-7 RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses) (gel-creams of O/W emulsion type contg. ammonium acryloyl <b>dimethyltaurate</b> /vinyl pyrrolidone copolymers)				

10056923/blessing

L8 ANSWER 1 OF 5 CAPLUS COPYRIGHT 2003 ACS

AN 2002:504591 CAPLUS

DN 137:67920

TI Water-in-oil emulsions containing ammonium acryloyl  
**dimethyltaurate**-vinyl pyrrolidone copolymers

IN Nielsen, Jens; Kroepke, Rainer; Bleckmann, Andreas

PA Beiersdorf A.-G., Germany

SO PCT Int. Appl., 41 pp.

CODEN: PIXXD2

DT Patent

LA German

IC ICM A61K007-48

ICS A61K047-32

CC 62-4 (Essential Oils and Cosmetics)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	----	-----	-----	-----
PI	WO 2002051377	A1	20020704	WO 2001-EP15095	20011220
	W: JP, US				
	RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR				
	DE 10065045	A1	20020704	DE 2000-10065045	20001223
PRAI	DE 2000-10065045	A	20001223		
AB	The invention relates to cosmetic or dermatol. emulsions of the water-in-oil type, contg. (i) up to 95 wt. % of a water phase, (ii) up to 60 wt. % of a lipid phase, relative to the total wt. of the prepns., (iii) up to 10 wt. % of one or more emulsifiers, (iv) and in addn. up to 5 wt. % of one or more ammonium acryloyl <b>dimethyltaurates</b> - vinyl pyrrolidone copolymers. Thus a W/O cream contained (wt./wt.%): PEG-30-dipolyhydroxystearate 5.00; hydrated coco glyceride 3.00; glycerin 3.00; ceresin 0.50; magnesium sulfate 0.70; mineral oil 12.00; caprylyl ether 8.00; ammonium acryloyl <b>dimethyltaurate</b> -vinyl pyrrolidone copolymer 0.01; cetylstearyl isononanoate 6.00; preservative, perfume q.s.; water to 100.00.				
ST	water oil emulsion ammonium acryloyl <b>dimethyltaurate</b> vinyl pyrrolidone copolymer				
IT	Alcohols, biological studies				
	RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses) (C16-18, esters with isononanoic acid; water-in-oil emulsions contg. ammonium acryloyl <b>dimethyltaurate</b> -vinyl pyrrolidone copolymers)				
IT	Glycerides, biological studies				
	RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses) (coco, hydrated; water-in-oil emulsions contg. ammonium acryloyl <b>dimethyltaurate</b> -vinyl pyrrolidone copolymers)				
IT	Cosmetics				
	(emulsions; water-in-oil emulsions contg. ammonium acryloyl <b>dimethyltaurate</b> -vinyl pyrrolidone copolymers)				
IT	Polyoxyalkylenes, biological studies				
	RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses) (reaction product with stearic acid; water-in-oil emulsions contg. ammonium acryloyl <b>dimethyltaurate</b> -vinyl pyrrolidone copolymers)				
IT	Emulsifying agents				
	(water-in-oil emulsions contg. ammonium acryloyl <b>dimethyltaurate</b> -vinyl pyrrolidone copolymers)				
IT	Lipids, biological studies				
	Paraffin oils				
	RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses) (water-in-oil emulsions contg. ammonium acryloyl <b>dimethyltaurate</b> -vinyl pyrrolidone copolymers)				



10056923/blessing

IT Emulsions

(water-in-oil; water-in-oil emulsions contg. ammonium acryloyl  
**dimethyltaurate**-vinyl pyrrolidone copolymers)

IT 56-81-5, Glycerin, biological studies 57-11-4D, Stearic acid,  
dipolyhydroxy compd. with PEG 25322-68-3D, PEG, reaction product with  
stearic acid 26896-18-4D, Isononanoic acid, esters with C16-18-alcs.  
335383-60-3, Aristoflex AVC

RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)

(water-in-oil emulsions contg. ammonium acryloyl

**dimethyltaurate**-vinyl pyrrolidone copolymers)

RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

- (1) Calgon Corp; EP 0522756 A 1993 CAPLUS
- (2) Clariant Gmbh; EP 1106169 A 2001 CAPLUS
- (3) Clariant Gmbh; EP 1116733 A 2001 CAPLUS
- (4) Oreal; EP 0815828 A 1998 CAPLUS

L8 ANSWER 3 OF 5 CAPLUS COPYRIGHT 2003 ACS

AN 2002:486104 CAPLUS

DN 137:52047

TI Gel-creams of the O/W emulsion type containing ammonium acryloyl  
**dimethyltaurate**/vinyl pyrrolidone copolymersIN Lanzendoerfer, Ghita; Nielsen, Jens; Hargens, Birgit; Kroepke, Rainer;  
Riedel, Heidi; Von Thaden, Stephanie

PA Beiersdorf Aktiengesellschaft, Germany

SO Eur. Pat. Appl., 17 pp.

CODEN: EPXXDW

DT Patent

LA German

IC ICM A61K007-032

ICS A61K007-48; A61P017-00

CC 62-4 (Essential Oils and Cosmetics)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 1216686	A2	20020626	EP 2001-130560	20011221
	EP 1216686	A3	20020717		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
	DE 10065047	A1	20020704	DE 2000-10065047	20001223
	US 2002155076	A1	20021024	US 2001-25062	20011219
	JP 2002212022	A2	20020731	JP 2001-389388	20011221
PRAI	DE 2000-10065047	A	20001223		
AB	The invention concerns cosmetic and dermatol. oil-in-water gel-creams that contain up-to 90 wt./wt.% water, up-to 20 wt./wt.% lipids, up-to 5 wt./wt.% emulsifiers and up-to 5 wt./wt.% of at least one ammonium acryloyl <b>dimethyltaurate</b> /vinyl pyrrolidone copolymer. The compns. further contain dyes; they are used for the prepn. of eye shadows. Thus a hydrodispersion gel contained (wt./wt.%): PEG-8 5.00; ethanol 10.0; Aristoflex AVC 0.70; triglyceride, liq. 1.50; glycerin 5.00; panthenol 0.50; tocopherol acetate 0.50; perfume, preservative, sodium hydroxide, dyes, antioxidants q.s; water to 100.				
ST	hydrogel cosmetics ammonium acryloyl <b>dimethyltaurate</b> vinyl pyrrolidone copolymer Aristoflex; eye shadow cosmetics hydrogel Aristoflex AVC				
IT	Cosmetics (eye shadows; gel-creams of O/W emulsion type contg. ammonium acryloyl <b>dimethyltaurate</b> /vinyl pyrrolidone copolymers)				
IT	Emulsifying agents Hydrogels (gel-creams of O/W emulsion type contg. ammonium acryloyl <b>dimethyltaurate</b> /vinyl pyrrolidone copolymers)				
IT	Glycerides, biological studies Lipids, biological studies RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses) (gel-creams of O/W emulsion type contg. ammonium acryloyl <b>dimethyltaurate</b> /vinyl pyrrolidone copolymers)				
IT	Emulsions (oil-in-water; gel-creams of O/W emulsion type contg. ammonium acryloyl <b>dimethyltaurate</b> /vinyl pyrrolidone copolymers)				
IT	335383-60-3, Aristoflex AVC 438624-48-7 RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses) (gel-creams of O/W emulsion type contg. ammonium acryloyl <b>dimethyltaurate</b> /vinyl pyrrolidone copolymers)				

L8 ANSWER 4 OF 5 USPATFULL

AN 2002:336894 USPATFULL

10056923/blessing

TI Composition containing fibers, spherical particles and platelets, and its uses  
IN Chevalier, Veronique, Villecresnes, FRANCE  
Agostini, Albane, Verrieres Le Buisson, FRANCE  
PA L'OREAL, Paris, FRANCE (non-U.S. corporation)  
PI US 2002192250 A1 20021219  
AI US 2002-100907 A1 20020320 (10)  
PRAI FR 2001-3767 20010320  
DT Utility  
FS APPLICATION  
LREP OBLON SPIVAK MCCLELLAND MAIER & NEUSTADT PC, FOURTH FLOOR, 1755 JEFFERSON DAVIS HIGHWAY, ARLINGTON, VA, 22202  
CLMN Number of Claims: 30  
ECL Exemplary Claim: 1  
DRWN No Drawings  
AB The invention relates to a composition containing an oily phase dispersed in an aqueous phase, fibers, spherical particles and platelets. The composition has very good stability and applies very uniformly to the skin, with no phenomenon of pilling or of aggregation. It may especially constitute an oil-in-water emulsion that may be used as a cosmetic composition. The invention also relates to the use of the said composition especially to care for, treat, make up or cleanse the skin, the lips, the eyelashes and/or the hair.

#### SUMM BACKGROUND OF THE INVENTION

##### [0001] 1. Field of the Invention

[0002] The present invention relates to a composition comprising, preferably in a physiologically acceptable medium, an oily phase dispersed in an aqueous phase, fibers, spherical particles and platelets, and to the use of the composition, preferably to care for, treat and/or make up keratin materials such as body or facial skin, the hair, the eyelashes and/or the lips.

##### [0003] 2. Discussion of the Background

[0004] Document JP 07-196 440 discloses cosmetic compositions containing short polyamide fibers, the compositions allegedly having a velvety feel and good cosmetic staying power. However, the incorporation of the fibers, and in particular of these polyamide fibers, into dispersions comprising an oily phase dispersed in an aqueous phase, and in particular into oil-in-water (O/W) emulsions that are dispersions stabilized with emulsifiers, poses problems when applying the composition to keratin materials such as the skin, and especially when there is a large amount of fibers. Specifically, the fibers, especially when they are in a relatively large amount, have a tendency to aggregate in O/W emulsions containing them. Moreover, these emulsions containing fibers have a tendency to "pill" on the skin, that is to say to be applied in packets appearing as small balls on the skin.

#### OBJECT OF THE INVENTION

[0005] There is thus still a need for O/W dispersions, and especially O/W emulsions, containing fibers, and especially polyamide fibers, even in a large amount, which do not have the drawbacks of the prior art.

#### SUMMARY OF THE INVENTION

[0006] The inventors have discovered, unexpectedly, that combining fibers, spherical particles and platelets makes it possible to avoid the problems of pilling and of aggregation, believed to be caused by the

fibers, and to prepare, e.g., oil-in-water emulsions containing fibers, which do not pose any problems when applied to the skin, even in the presence of a large amount of fibers.

DETD DETAILED DESCRIPTION OF THE INVENTION

[0007] The present invention relates to a composition comprising, preferably in a physiologically acceptable medium, an oily phase dispersed in an aqueous phase, fibers, spherical particles and platelets.

[0008] The expression "physiologically acceptable medium" means herein a medium that is compatible with keratin materials such as the skin, the lips, the scalp, the eyelashes, the eyes and/or the hair.

[0009] The dispersion may preferably be an O/W emulsion.

[0010] The composition of the invention makes it possible not only to prevent the fibers from aggregating, but also to facilitate the application of the composition containing them to keratin materials, and in particular to the skin. Thus, the composition according to the invention does not "pill" and therefore does not form small balls when applied to the skin. In addition, it disintegrates easily, that is to say that it can be easily applied and is deposited in a sufficient amount and in a uniform manner on the skin or the keratin material on which it is applied. This effect of combining platelets and spherical particles is found for any composition containing fibers, and is especially useful for dispersions.

[0011] A subject of the invention is also the cosmetic use the combination of platelets and spherical particles in a cosmetic composition containing fibers, to prevent the fibers from aggregating, to prevent the composition from pilling, and to facilitate the application (and the disintegration) of the composition to keratin materials and especially the skin.

[0012] In the present patent application, the expression "spherical particles" means particles having or substantially having the shape of a sphere, which are insoluble in the medium of the composition, even at the melting point of the medium (e.g., about 100.degree. C.).

[0013] In addition, the terms "platelets" and "leaflets" mean herein particles of parallelepipedal shape (rectangular or square surface area), discoid shape (circular surface area) or ellipsoid shape (oval surface area), characterized by three dimensions: a length, a width and a height, these particles being insoluble in the medium of the composition according to the invention, even at the melting point of the medium (e.g., about 100.degree. C.).

[0014] The composition of the invention may comprise one or more kinds of fiber, one or more kinds of spherical particle, and one or more kinds of platelet. Fibers

[0015] The fibers which may be used in the composition of the invention include hydrophilic or hydrophobic fibers, of natural or synthetic, mineral or organic origin.

[0016] These fibers may be short or long, individual or organized, for example braided. They are generally of cylindrical shape, unlike the platelets, which are of parallelepipedal, etc. shape, or the spherical particles, which are of spherical shape. They may have any morphology

and in particular may have a circular or polygonal (square, triangular, hexagonal or octagonal) cross section depending on the specific application envisaged. In particular, their ends may be blunted and/or polished to prevent injury.

[0017] The fibers may have a length (L) ranging from 1 .mu.m (0.001 mm) to 10 mm, preferably from 0.1 .mu.m to 5 mm and better still from 0.1 mm to 1.5 mm. Their cross section may be within a circle of diameter (D) ranging from 1 nm (0.001 .mu.m) to 100 .mu.m, preferably ranging from 1 nm (0.001 .mu.m) to 50 .mu.m and better still from 5 .mu.m to 40 .mu.m.

[0018] Preferably, the fibers used according to the present invention have a shape factor, i.e. a ratio L/D (length/diameter) ranging from 3.5 to 2,500, better still from 5 to 500 and even better still from 5 to 150.

[0019] The yarn count of fibers is often given in denier or decitex. The denier is the weight in grams for 9 km of yarn. The fibers used according to the invention preferably have a yarn count ranging from 0.15 to 30 denier and better still from 0.18 to 18 denier.

[0020] The shape factor, the yarn count and the morphology of the fibers are the three factors that are important for defining a fiber.

[0021] The fibers may be those used in the manufacture of textiles and in particular silk, cotton, wool or flax fibers, cellulose fibers extracted in particular from wood, plants or algae, polyamide (Nylon.RTM. fibers, modified cellulose (rayon, viscose or acetate, in particular rayon acetate) fibers, poly-p-phenyleneterephthalamide fibers, in particular Kevlar.RTM. fibers, acrylic fibers, in particular polymethyl methacrylate or poly(2-hydroxyethyl methacrylate) fibers, polyolefin fibers and in particular polyethylene or polypropylene fibers, glass, silica or aramid fibers, carbon fibers, in particular in the form of graphite, Teflon fibers, insoluble collagen fibers, polyester, polyvinyl chloride, polyvinylidene chloride, polyvinyl alcohol, polyacrylonitrile, chitosan, polyurethane or polyethylene phthalate fibers, and fibers formed from a mixture of polymers such as those mentioned above, for instance polyamide/polyester fibers.

[0022] Examples of polyurethane fibers include poly(urethane-urea) polymer fibers, belonging to the elastane class, and especially those sold under the name Lycrag by the company DuPont.

[0023] Resorbable synthetic fibers used in surgery may also be used, for instance the fibers prepared from glycolic acid and from caprolactone (Monocryl from the company Johnson & Johnson); resorbable synthetic fibers such as the copolymer of lactic acid and of glycolic acid (Vicryl from the company Johnson & Johnson); terephthalic polyester fibers (Ethibond from the company Johnson & Johnson) and stainless steel yams (Acier from the company Johnson & Johnson).

[0024] Mixtures of fibers may also be used.

[0025] Moreover, the fibers may or may not be surface-treated and may be coated or uncoated. They may especially be coated and/or functionalized fibers, the term "functionalized" meaning that the fibers are surface-treated so as to modify their properties.

[0026] Coated fibers which may be used in the invention include polyamide fibers coated with copper sulphide for an antistatic effect (for example R-STAT from the company Rhodia) or another polymer allowing a particular organization of the fibers (specific surface treatment) or

a surface treatment which induces colour/hologram effects (for example Lurex fiber from the company Sildorex).

[0027] The fibers can also be functionalized, that is to say be modified so as to have a specific function. This functionalization of the fibers can be carried out both on the fibers and in the fibers and by any method which makes it possible to attach a compound to the fibers or to trap it within the cavities formed by the geometry of the fibers. Mention may be made, as methods, of, for example, coating the fibers with an active principle; fixing, to the fibers, particles enclosing an active principle, such as nanocapsules or nanospheres; adsorption in the fibers; or fixing by chemical reaction. It is thus possible to use fibers having specific functional purposes, for example fibers which are stabilized against UV radiation by modification with chemical or physical sunscreens; fibers which have been rendered bactericidal or antiseptic by modification with preservatives or antibacterials; fibers which have been coloured by modification with colouring molecules; fibers which have been rendered keratolytic or desquamating by modification with keratolytic or desquamating agents; fibers which have been rendered hydrating by modification with hydrating agents or water-retaining polymers; fibers which have been rendered fragrant by modification with a fragrance; fibers which have been rendered analgesic or soothing by modification with an antiinflammatory or a soothing agent; or fibers which have been rendered resistant to perspiration by modification with an antiperspirant

[0028] According to their properties, the fibers used according to the present invention may be introduced into an aqueous medium, an oily medium or into a powder.

[0029] The fibers which may be used according to the invention are preferably chosen from polyamide fibers, poly-p-phenyleneterephthalamide fibers and cotton fibers, and mixtures thereof. Their length may preferably range from 0.1 to 10 mm and preferably from 0.1 to 1 mm, their mean diameter may range from 5 to 50  $\mu\text{m}$  and the shape factor preferably ranges from 5 to 150.

[0030] In particular, the polyamide fibers sold by Etablissements P. Bonte under the name Polyamide 0.9 dtex 0.3 mm, having a mean diameter of from 15 to 20  $\mu\text{m}$ , a yarn count of about 0.9 dtex (0.81 denier) and a length ranging from 0.3 mm to 1.5 mm, may be used. Poly-p-phenyleneterephthalamide fibers with a mean diameter of 12  $\mu\text{m}$  and a length of about 1.5 mm may also be used, such as those sold under the name Kevlar Floc by the company Du Pont Fibers. These polyamide fibers are preferably introduced into an oily medium or introduced via a dry route into a powder.

[0031] Cotton fibers with a mean diameter of 20  $\mu\text{m}$ , a length of 0.3 mm and a shape factor of 15 may also be used, such as those sold by the company Filature de Lomme, by the company Textiles des Dunes, by the Institut Textile de France or by the company Velifil.

[0032] The fibers may be present in the composition according to the invention in an amount ranging, for example, from 0.1% to 50% by weight, preferably from 0.5% to 30% by weight, better still from 1% to 20% by weight and even better from 2% to 15% by weight relative to the total weight of the composition, including 4, 5, 7, 9, 10, 12 and 14%.

#### Spherical Particles

[0033] The spherical particles according to the invention have or substantially have the shape of a sphere and may be hollow or solid.

Advantageously, the particles of the invention have a particle size (number-average diameter) ranging from 0.1  $\mu\text{m}$  to 250  $\mu\text{m}$ , better still from 1  $\mu\text{m}$  to 150  $\mu\text{m}$  and even better from 10  $\mu\text{m}$  to 100  $\mu\text{m}$ , including 20, 30, 40, 50, 60, 70, 80 and 90  $\mu\text{m}$ .

[0034] Useful spherical particles include organic and mineral microspheres. As non-limiting examples of spherical particles that may be used in the composition of the invention, mention may be made, for example, of silica powder; polyamide particles and especially Nylon 12, for instance the product sold under the name Orgasol by the company Atochem; polyethylene powders; microspheres based on acrylic copolymers, such as those made of ethylene glycol dimethacrylate/lauryl methacrylate copolymer sold by the company Dow Corning under the name Polytrap; expanded powders such as hollow microspheres, and especially the microspheres sold under the name Expancel by the company Kemanord Plast or under the name Micropearl F 80 ED by the company Matsumoto; powders of natural organic materials such as corn starch, wheat starch or rice starch, that may or may not be crosslinked, such as the starch powders crosslinked with octenylsuccinate anhydride, sold under the name Dry-Flo by the company National Starch; silicone resin microbeads such as those sold under the name Tospearl by the company Toshiba Silicone; and mixtures thereof.

[0035] The spherical particles of the invention may be present in amounts ranging, for example, from 0.1% to 30% by weight, preferably from 0.5% to 25% by weight and better still from 1% to 10% by weight relative to the total weight of the composition, including 2, 4, 6 and 8%.

#### Platelets

[0036] As mentioned above, the platelets are particles of parallelepipedal shape (rectangular or square surface area), discoid shape (circular surface area) or ellipsoid shape (oval surface area), characterized by three dimensions: a length, a width and a height. When the shape is circular, the length and width are identical and correspond to the diameter of a disc, whereas the height corresponds to the thickness of the disc. When the surface area is oval, the length and width correspond, respectively, to the major axis and the minor axis of an ellipse and the height corresponds to the thickness of the elliptical disc formed by the platelet. When it is a parallelepiped, the length and width may be of identical or different sizes: when they are of the same size, the shape of the surface area of the parallelepiped is square; in the contrary case, the shape is rectangular. As regards the height, it corresponds to the thickness of the parallelepiped.

[0037] The length of the platelets used according to the invention preferably ranges from 0.01 to 100  $\mu\text{m}$ , better still from 0.1 to 50  $\mu\text{m}$  and even better from 1 to 50  $\mu\text{m}$ , including 10, 20, 30 and 40  $\mu\text{m}$ . The width of these platelets preferably ranges from 0.01 to 100  $\mu\text{m}$ , better still from 0.1 to 50  $\mu\text{m}$  and even better from 1 to 10  $\mu\text{m}$ , including 3, 4, 6 and 8  $\mu\text{m}$ . The height (thickness) of these platelets preferably ranges from 0.1 nm to 1  $\mu\text{m}$  (0.1 to 1,000 nm), better still from 1 nm to 600 nm and even better from 1 nm to 500 nm, including 25, 50, 100, 200, 300, and 400 nm.

[0038] Examples of platelets that may be used in the composition of the invention include mineral and organic pigments, lamellar silicates, and mixtures thereof. The term "pigments" should be understood as meaning white or coloured, mineral or organic particles, which are insoluble in the medium of the composition, and which are intended to colour and/or opacify the composition.

[0039] Mineral pigments that may be used in the invention include titanium oxide, zirconium oxide or cerium oxide, and also zinc oxide, iron oxide or chromium oxide, and ferric blue, and mixtures thereof. Organic pigments that may be used in the invention include carbon black and barium, strontium, calcium and aluminium lakes, and mixtures thereof.

[0040] Lamellar silicates include clays, talcs, micas and nacres, and mixtures thereof.

[0041] The clays are mixed silicates of natural or synthetic origin containing several (two or more) types of cation chosen from alkali metals (for example Na, Li or K) or alkaline-earth metals (for example Be, Mg or Ca), transition metals and aluminium.

[0042] Clays that may be used in the invention include, for example, sodium magnesium silicate, clays of the kaolin family, such as kaolin or kaolinite, dickite and nacrite; clays of the halloysite, dombassite, antigorite, benthierine or pyrophyllite family; montmorillonites; beidellite; vermiculites; stevensite; hectorites; saponites; chlorites; sepiolite; smectite, and also these clays chemically modified, for example, with acrylic acids, polysaccharides (for example carboxymethylcellulose) or organic cations, and mixtures thereof.

[0043] The talcs are hydrated magnesium silicates usually comprising aluminium silicate. The crystal structure of talc consists of repeated layers of a sandwich of brucite between layers of silica.

[0044] The micas are aluminium silicates optionally comprising iron and/or alkali metals. They have the property of being able to divide into thin layers (about 1  $\mu\text{m}$ ). They generally range in size from 5 to 150  $\mu\text{m}$ , preferably from 10 to 100  $\mu\text{m}$  and better still from 10 to 60  $\mu\text{m}$  for the largest size (length), and a height (thickness) of from 0.1 to 0.5  $\mu\text{m}$ . The micas include phlogopite, muscovite, fluorophlogopite and vermiculite, and mixtures thereof. Mention may also be made of micaceous clays such as illite.

[0045] The "nacres" should be understood as meaning iridescent particles, produced especially by certain molluscs in their shell or else synthesized, which serve to modify the texture of the composition and also the matt/gloss effect. Nacres are generally micas that are surface-treated to obtain this iridescent effect. Nacres that may be used in the invention include, for example, micas coated with titanium oxide, with iron oxide, with natural pigment and/or with bismuth oxychloride, such as coloured or uncoloured titanium oxide-mica (or titanium-mica), and mixtures thereof.

[0046] According to one particularly preferred embodiment of the present invention, the platelets are chosen from sodium magnesium silicate; kaolin and kaolinite; montmorillonites; hectorites; talcs; micas; nacres, and mixtures thereof. Advantageously, the platelet used more particularly in the composition of the invention is kaolin, such as the product sold under the name Coslin C-100 by the company Engelhard; talc, such as those sold under the names Rose Talc and Talc SG-2000 by the company Nippon Talc; mica, such as those sold under the names Mica M RP and Silk Mica by the company Merck; titanium micas, such as mica-titanium oxide-brown iron oxide (CTFA: Mica/Iron oxides/Titanium oxide) sold under the name Cloisonne Rouge Flambe 440 X by the company Engelhard; or a modified hectorite such as, for example, a bentone and more particularly the mixture "cyclomethicone, Quaternium-18-hectorite, SD alcohol 40" (85/10/5) (CTFA name) sold under the name Bentone Gel



VS-5 by the company Rheox.

[0047] The amount of platelets may range, for example, from 0.1% to 30% by weight, preferably from 0.25% to 25% by weight and better still from 0.5% to 10% by weight relative to the total weight of the composition, including 1, 3, 5, 7 and 9%.

#### Oily Phase

[0048] The oily phase of the composition according to the invention is not limited, and may generally represent from 10% to 50% by weight and preferably from 15% to 30% by weight relative to the total weight of the composition.

[0049] The oily phase usually contains at least one oil. Examples of oils that may be used in the composition of the invention include:

[0050] hydrocarbon-based oils of animal origin, such as perhydrosqualene;

[0051] hydrocarbon-based oils of plant origin, such as liquid triglycerides of fatty acids containing from 4 to 10 carbon atoms, for instance heptanoic or octanoic acid triglyceride or alternatively, for example, sunflower oil, corn oil, soybean oil, marrow oil, grapeseed oil, sesame oil, hazelnut oil, apricot oil, macadamia oil, arara oil, sunflower oil, castor oil, avocado oil, caprylic/capric acid triglycerides for instance those sold by the company Stearineries Dubois or those sold under the names Miglyol 810, 812 and 818 by the company Dynamit Nobel, jojoba oil or karite butter oil;

[0052] synthetic esters and synthetic ethers, especially of fatty acids, for instance oils of formulae  $R_{sup.1}COOR_{sup.2}$  and  $R_{sup.1}OR_{sup.2}$  in which  $R_{sup.1}$  represents a fatty acid residue containing from 8 to 29 carbon atoms and  $R_{sup.2}$  represents a branched or unbranched hydrocarbon-based chain containing from 3 to 30 carbon atoms, such as, for example, purcellin oil, isononyl isononanoate, isopropyl myristate, 2-ethylhexyl palmitate, 2-octyldodecyl stearate, 2-octyldodecyl erucate or isostearyl isostearate; hydroxylated esters such as isostearyl lactate, octyl hydroxystearate, octyldodecyl hydroxystearate, diisostearyl malate, triisocetyl citrate and fatty alkyl heptanoates, octanoates and decanoates; polyol esters, for instance propylene glycol dioctanoate, neopentyl glycol diheptanoate and diethylene glycol diisononanoate; and pentaerythritol esters, for instance pentaerythrityl tetraisostearate;

[0053] linear or branched hydrocarbons of mineral or synthetic origin, such as volatile or non-volatile liquid paraffins, and derivatives thereof, petroleum jelly, polydecenes, and hydrogenated polyisobutene such as Parleam.RTM. oil;

[0054] fatty alcohols containing from 8 to 26 carbon atoms, for instance cetyl alcohol, stearyl alcohol and a mixture thereof (cetylstearyl alcohol), octyldodecanol, 2-butyloctanol, 2-hexyldecanol, 2-undecylpentadecanol, oleyl alcohol or linoleyl alcohol; -alkoylated and especially ethoxylated fatty alcohols such as oleth-12;

[0055] partially hydrocarbon-based and/or silicone-based fluoro oils, for instance those described in document JP-A-2 295 912. Examples of fluoro oils which may also be mentioned include perfluoromethylcyclopentane and perfluoro-1,3-dimethylcyclohexane, sold under the names "Flutes PC1.RTM." and "Flutes PC3.RTM." by the company BNFL Fluorochemicals; perfluoro-1,2-dimethylcyclobutane;

perfluoroalkanes such as dodecafluoropentane and tetradecafluorohexane, sold under the names "PF 5050.RTM." and "PF 5060.RTM." by the company 3M, or alternatively bromoperfluorooctyl sold under the name "Foralkyl.RTM." by the company Atochem; nonafluoromethoxybutane sold under the name "MSX 451 8.RTM." by the company 3M and nonafluoroethoxyisobutane; perfluoromorpholine derivatives, such as the 4-trifluoromethylperfluoromorpholine sold under the name "PF 5052.RTM." by the company 3M; -silicone oils, for instance volatile or non-volatile polymethylsiloxanes (PDMSs) containing a linear or cyclic silicone chain, that are liquid or pasty at room temperature, especially cyclopolydimethylsiloxanes (cyclomethicones) such as cyclohexasiloxane; polydimethylsiloxanes comprising alkyl, alkoxy or phenyl groups, that are pendent or at the end of a silicone chain, these groups containing from 2 to 24 carbon atoms; phenylsilicones, for instance phenyltrimethicones, phenyldimethicones, phenyltrimethylsiloxydiphenylsiloxanes, diphenyldimethicones, diphenylmethyldiphenyltrisiloxanes, 2-phenylethyltrimethylsiloxyisilicates and polymethylphenylsiloxanes;

[0056] mixtures thereof.

[0057] In the list of oils mentioned above, the expression "hydrocarbon-based oil" means any oil mainly comprising carbon and hydrogen atoms, and optionally ester, ether, fluoro, carboxylic acid and/or alcohol groups.

[0058] Other fatty substances that may be present in the oily phase. For example, fatty acids containing from 8 to 30 carbon atoms, for instance stearic acid, lauric acid, palmitic acid and oleic acid; waxes, for instance lanolin, beeswax, carnauba wax or candelilla wax, paraffin wax, lignite wax or microcrystalline waxes, ceresin or ozokerite, synthetic waxes such as polyethylene waxes, Fischer-Tropsch waxes; gums such as silicone gums (dimethiconol); silicone resins such as trifluoromethyl-C1-4-alkyldimethicone and trifluoropropyldimethicone; and silicone elastomers, for instance the products sold under the names "KSG" by the company Shin-Etsu, under the names "Trefil", "BY29" or "EPSX" by the company Dow Corning or under the names "Gransil" by the company Grant Industries.

[0059] These fatty substances may be chosen in a varied manner by a person skilled in the art so as to prepare a composition having the desired properties, for example in terms of consistency or texture, in view of this disclosure.

#### Aqueous Phase

[0060] The aqueous phase of the composition of the invention generally constitutes from 30% to 85% and preferably from 60% to 75% by weight relative to the total weight of the composition, including 65 and 70%. Water is usually the main component of the aqueous phase, the aqueous phase possibly containing other aqueous soluble components, etc.

#### Additives

[0061] The composition according to the invention may especially constitute an oil-in-water emulsion. In this case, it preferably contains at least one emulsifier chosen from those conventionally used for the preparation of O/W emulsions.

[0062] Useful emulsifiers include nonionic surfactants, and especially esters of polyols and of fatty acids containing a saturated or unsaturated chain containing, for example, from 8 to 24 carbon atoms and better still from 12 to 22 carbon atoms, and oxyalkylenated derivatives

thereof, that is to say derivatives comprising oxyethylene and/or oxypropylene units, such as glyceryl esters of C.sub.8-C.sub.24 fatty acids, and oxyalkylenated derivatives thereof; polyethylene glycol esters of C.sub.8-C.sub.24 fatty acids, and oxyalkylenated derivatives thereof; sorbitol esters of C.sub.8-C.sub.24 fatty acids, and oxyalkylenated derivatives thereof, sugar (sucrose, glucose or alkylglucose) esters of C.sub.8-C.sub.24 fatty acids, and oxyalkylenated derivatives thereof; and mixtures thereof.

[0063] Glyceryl esters of fatty acids that may especially be mentioned include glyceryl stearate (glyceryl mono-, di- and/or tristearate) or glyceryl ricinoleate, and mixtures thereof.

[0064] Polyethylene glycol esters of fatty acids that may especially be mentioned include polyethylene glycol stearate (polyethylene glycol mono-, di- and/or tristearate), and more especially polyethylene glycol 50 EO monostearate (CTFA name: PEG-50 stearate), and mixtures thereof.

[0065] Fatty acid esters of glucose or of alkylglucose that may be mentioned in particular include glucose palmitate, alkyl glucose sesquistearamates, for instance methylglucose sesquistearamate, alkylglucose palmitates, for instance methylglucose palmitate or ethylglucose palmitate, methylglucoside fatty esters and more especially the diester of methylglucoside and of oleic acid (CTFA name: methyl glucose dioleate); the mixed ester of methylglucoside and of the oleic acid/hydroxystearic acid mixture (CTFA name: methyl glucose dioleate/hydroxystearate); the ester of methylglucoside and of isostearic acid (CTFA name: methyl glucose isostearate); the ester of methylglucoside and of lauric acid (CTFA name: methyl glucose laurate); the mixture of methylglucoside monoester and diester and of isostearic acid (CTFA name: methyl glucose sesqui-isostearate); the mixture of methylglucoside monoester and diester and of stearic acid (CTFA name: methyl glucose sesquistearamate) and in particular the product sold under the name Glucate SS by the company Amerchol, and mixtures thereof.

[0066] Useful oxyethylenated ethers of fatty acid and of glucose or of alkylglucose include oxyethylenated ethers of fatty acids and of methylglucose, and in particular the polyethylene glycol ether of the diester of methylglucose and of stearic acid containing about 20 mol of ethylene oxide (CTFA name: PEG-20 methyl glucose distearate), such as the product sold under the name Glucam E-20 distearate by the company Amerchol; the polyethylene glycol ether of the mixture of methyl glucose monoester and diester and of stearic acid containing about 20 mol of ethylene oxide (CTFA name: PEG-20 methyl glucose sesquistearamate) and in particular the product sold under the name Glucamate SSE-20 by the company Amerchol and the product sold under the name Grillocoese PSE-20 by the company Goldschmidt, and mixtures thereof.

[0067] Useful sucrose esters include sucrose palmitostearate, sucrose stearate and sucrose monolaurate.

[0068] Depending on their nature, these emulsifiers are introduced into the aqueous phase or into the oily phase. There may also be an emulsifier in the aqueous phase and another emulsifier in the oily phase. Such is within the skill of the ordinary artisan in view of this disclosure.

[0069] According to one particular embodiment of the invention, the emulsifiers) is (are) chosen from nonionic surfactants, and especially polyol esters of fatty acids and oxyethylenated derivatives thereof, and more particularly glucose or alkylglucose esters of fatty acids and oxyethylenated derivatives thereof, and mixtures thereof.

[0070] The amount of emulsifiers may range, for example, from 0.1% to 15% by weight, preferably from 0.5% to 10% by weight and better still from 1% to 8% by weight relative to the total weight of the composition.

[0071] The compositions of the invention may contain adjuvants that are common in the fields under consideration, such as hydrophilic or lipophilic active agents, preserving agents, gelling agents, antioxidants, fragrances, solvents, screening agents, soluble dyes, basic or acidic agents and also lipid vesicles. These adjuvants can be used in the usual proportions, for example in the field of cosmetics, and, for example, from 0.01% to 30% of the total weight of the emulsion, and, depending on their nature, they are introduced into the aqueous phase or into the oily phase of the emulsion, or alternatively into vesicles. These adjuvants and their concentrations should be such that they do not modify the desired property for the emulsion of the invention, all of which is within the skill of the ordinary artisan in view of this disclosure.

[0072] Useful active agents include moisturizers such as polyols, for instance glycerol and sorbitol; keratolytic agents; depigmenting agents; slimming agents and any active agent that is suitable for the final aim of the composition.

[0073] Depending on the desired fluidity of the composition, one or more hydrophilic or lipophilic gelling agents may be added thereto. Examples of hydrophilic gelling agents include carboxyvinyl polymers, such as carbomers; polyacrylamides and polymers and copolymers of 2-acrylamido-2-methylpropanesulphonic acid, that are optionally crosslinked and/or neutralized, for instance poly(2-acrylamido-2-methylpropane sulphonic acid) sold by the company Hoechst under the trade name "Hostacerin AMPS" (CTFA name: ammonium polyacryldimethyltauramide).

[0074] Useful lipophilic gelling agents include modified clays such as bentones, such as the mixture "cyclomethicone, Quaternium-18 hectorite, SD alcohol 40" (10/85/5) (CTFA name) sold under the name Bentone Gel VS-5 by the company Rheox; crosslinked elastomeric organopolysiloxanes such as those sold under the names KSG6 from Shin-Etsu, Trefil E-505C or Trefil E-506C from Dow Corning, Gransil from Grant Industries (SR-CYC, SR DMF10 or SR-DC556), or those sold in the form of gels: KSG15, KSG17, KSG16 and KSG18 from Shin-Etsu, Gransil SR 5CYC gel, Gransil SR DMF 10 gel, Gransil SR DC 556 gel and SF 1204 and JK 113 from General Electric.

[0075] When they are present, these gelling agents may generally be used at concentrations ranging from 0.1% to 7% and preferably from 0.1% to 5% by weight of active material relative to the total weight of the composition.

[0076] The compositions that are the subject of the invention find their application in a large number of treatments, especially cosmetic or dermatological treatments, and they may thus constitute a cosmetic composition, especially for treating, protecting, caring for, removing make-up from and/or cleansing the skin, the lips and/or the hair, and/or for making up the skin of the lips, the eyelashes and the body.

[0077] The compositions according to the invention may be used, for example, as care, make-up-removing and/or cleansing products for the face in the form of creams or milks, or as make-up products (for the skin, eyelashes and lips) by incorporation of pigments or colorants, for example as foundations.

[0078] Thus, a subject of the invention is the cosmetic use of the composition as defined above for treating, protecting, caring for, removing make-up from and/or cleansing the skin, the lips and/or the hair, and/or for making up the skin, the lips, the eyelashes and/or the body.

[0079] A subject of the invention is also a cosmetic process for treating the skin, including the scalp, the hair, the eyelashes and/or the lips, characterized in that a composition as defined above is applied to the skin, the hair, the eyelashes and/or the lips.

[0080] The examples which follow will make it possible to understand the invention more clearly, without, however, being limiting in nature. The amounts indicated are in percentages by weight, except where otherwise mentioned.

[0081] The example according to the invention was compared in a test on a panel of 12 users with an identical composition but not containing either the platelets (comparative example 1), or the spherical particles (comparative example 2). The application was performed comparatively by half-face application, the composition of the invention being applied to one half of the face, while one of the comparative examples was applied to the other half of the face.

Composition	Example 1 according to the invention	Comparative Example 1	Comparative Example 2
Phase A1			
Methyl glucose sesquistearate (Glucate SS)	2%	2%	2%
Stearyl alcohol/ ceteareth-20	2%	2%	2%
Preserving agents	0.1%	0.1%	0.1%
2-Octyldodecanol	4%	4%	4%
Phase A2			
Cyclopentasiloxane	5%	5%	5%
Phase B1			
Glycerol	3%	3%	3%
Sodium magnesium silicate (clay) (platelets)	0.5%	--	0.5%
Demineralized water	qs 100%	qs 100%	qs 100%
Preserving agents	0.25%	0.25%	0.25%
Phase B2			
PEG-20 methyl glucose sesquul- stearate (Glucamate SSE 20)	3%	3%	3%
Demineralized water	19%	19%	19%
Phase C			
Nylon-12 (Orgasol) (spherical particles)	2%	2%	--
Polyamide fibers (Nylon-6,6) (Polyamide 0.9 Dtex, 0.3 mm- Paul Bonte Company)	10%	10%	10%
Phase D			

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Ammonium polyacryloyl- dimethyltaurate (Hostacerin AMPS from Clariant)	0.2%	0.2%	0.2%
Quality of the composition obtained	creamy, fine and soft easy to apply uniform deposit	fluid, slides over the fingers pilling of the composition application	creamy and fine. Compared with Ex. 1: fibers more persistent on the skin, more difficult to apply, less uniform deposit

Procedure: Phases A1 and A2 are heated separately (about 70.degree. C.) with stirring and then mixed together. Similarly, phases B1 and B2 are heated separately (about 70.degree. C.) with stirring and then mixed together. The mixture of B1 and B2 is then poured into the mixture of A1 and A2 with stirring. Phase D is then added and the resulting mixture is homogenized.

[0082] The three compositions have a white fibrous texture. The test demonstrates the advantage of the composition according to the invention, which does not pill when applied to the skin and gives a more uniform and easier deposit than the compositions of the comparative examples.

[0083] French Patent Application 0103767 filed Mar. 20, 2001 is incorporated herein by reference, as are all documents, publications, articles, standards, and patents referred to above.

[0084] Whenever a number range is disclosed all values and subranges between stated values are included as if specifically written out.

[0085] The use of the invention composition is within the skill of the ordinary artisan in view of this disclosure, and depends in part on its ingredients and the desired effect. For example, a user can apply 0.1-5 g of composition to keratin material such as skin once or more daily, optionally over a long term.

[0086] Obviously, numerous modifications and variations of the present invention are possible in light of the above teachings. It is therefore to be understood that within the scope of the appended claims, the invention may be practiced otherwise than as specifically described herein.

- CLM      What is claimed is:
1. A composition comprising an oily phase dispersed in an aqueous phase, fibers, spherical particles, and platelets.
  2. The composition according to claim 1, wherein the fibers have a length (L) ranging from 1 .mu.m to 10 mm.
  3. The composition according to claim 1, wherein the fibers have a cross section that is within a circle of diameter (D) ranging from 1 nm to 100 .mu.m.
  4. The composition according to claim 1, wherein the fibers have a shape factor (L/D) ranging from 5 to 150.
  5. The composition according to claim 1, wherein the fibers have a yarn

count ranging from 0.15 to 30 denier.

6. The composition according to claim 1, wherein said fibers are selected from the group consisting of silk, cotton, wool, flax, wood, polyamide, modified cellulose, poly-p-phenyleneterephthalamide, acrylic, polyolefin, glass, silica, aramid, carbon, Teflon, insoluble collagen, polyester, polyvinyl chloride, polyvinylidene chloride, polyvinyl alcohol, polyacrylonitrile, chitosan, polyurethane, polyethylene phthalate, and fibers of a mixture of polymers.

7. The composition according to claim 1, wherein said fibers are coated, functionalized, or coated and functionalized.

8. The composition according to claim 1, wherein said fibers are made of a material selected from the group consisting of polyamide, poly-p-phenyleneterephthalamide, and cotton.

9. The composition according to claim 1, wherein the fibers are present in an amount ranging from 0.1% to 50% by weight relative to the total weight of the composition.

10. The composition according to claim 1, wherein the spherical particles are organic or mineral microspheres.

11. The composition according to claim 1, wherein spherical particles have a particle size ranging from 0.1  $\mu\text{m}$  to 250  $\mu\text{m}$ .

12. The composition according to claim 1, wherein the spherical particles are selected from the group consisting of silica powder; polyamide particles; polyethylene powders; acrylic copolymer microspheres; expanded powders; powders of natural organic materials; silicone resin microbeads; and mixtures thereof.

13. The composition according to claim 1, wherein the spherical particles are present in an amount ranging from 0.1% to 30% by weight relative to the total weight of the composition.

14. The composition according to claim 1, wherein the platelets have a length ranging from 0.01 to 100  $\mu\text{m}$ , a width of from 0.01 to 100  $\mu\text{m}$  and a height ranging from 0.1 to 1,000 nm.

15. The composition according to claim 1, wherein the platelets are selected from the group consisting of mineral or organic pigments, lamellar silicates, and mixtures thereof.

16. The composition according to claim 1, wherein the platelets are selected from the group consisting of titanium oxide, zirconium oxide or cerium oxide, zinc oxide, iron oxide or chromium oxide, ferric blue, carbon black and barium, strontium, calcium, and aluminium lakes, and mixtures thereof.

17. The composition according to claim 1, wherein the platelets are selected from the group consisting of clays, talcs, micas, nacres, and mixtures thereof.

18. The composition according to claim 1, wherein the platelets are selected from the group consisting of sodium magnesium silicate; kaolin, hectorites, talcs, micas, micas coated with titanium oxide, micas coated with iron oxide, micas coated with natural pigment, micas coated with bismuth oxychloride, and mixtures thereof.

19. The composition according to claim 1, wherein the platelets are

present in an amount ranging from 0.1% to 30% by weight relative to the total weight of the composition.

20. The composition according to claim 1, wherein the oily phase represents from 10% to 50% by weight relative to the total weight of the composition.

21. The composition according to claim 1, wherein said composition is an oil-in-water emulsion.

22. The composition according to claim 21, further comprising at least one nonionic surfactant emulsifier.

23. The composition according to claim 22, wherein the nonionic surfactant is a polyol ester of a fatty acid containing a saturated or unsaturated chain containing from 8 to 24 carbon atoms or an oxyalkylenated derivative thereof.

24. The composition according to claim 22, wherein the nonionic surfactant is a fatty acid ester of glucose or of alkylglucose, or an oxyethylenated derivative thereof.

25. The composition according to claim 22, wherein the amount of emulsifier ranges from 0.1% to 15% by weight relative to the total weight of the composition.

26. The composition according to claim 1, wherein said composition is a cosmetic composition.

27. The composition of claim 1, wherein: the fibers have a length (L) ranging from 1  $\mu\text{m}$  to 10 mm, the fibers have a cross section that is within a circle of diameter (D) ranging from 1 nm to 100  $\mu\text{m}$ , the fibers have a shape factor (L/D) ranging from 5 to 150, the fibers have a yarn count ranging from 0.15 to 30 denier, the fibers are present in an amount ranging from 1% to 20% by weight relative to the total weight of the composition, the spherical particles are organic or mineral microspheres, the spherical particles have a particle size ranging from 0.1  $\mu\text{m}$  to 250  $\mu\text{m}$ , the spherical particles are present in an amount ranging from 0.5% to 25% by weight relative to the total weight of the composition, the platelets have a length ranging from 0.01 to 100  $\mu\text{m}$ , a width of from 0.01 to 100  $\mu\text{m}$  and a height ranging from 0.1 to 1,000 nm, the platelets are present in an amount ranging from 0.25% to 25% by weight relative to the total weight of the composition, the oily phase represents from 15% to 30% by weight relative to the total weight of the composition, and the composition is an oil-in-water emulsion.

28. A process for treating the skin, the hair, the eyelashes and/or the lips, comprising applying the composition of claim 26 to the skin, the hair, the eyelashes, and/or the lips.

29. A process for treating the skin, the hair, the eyelashes and/or the lips, comprising applying the composition of claim 27 to the skin, the hair, the eyelashes, and/or the lips.

30. The composition according to claim 1, further comprising a physiologically acceptable medium.



L8 ANSWER 4 OF 5 USPATFULL  
AN 2002:336894 USPATFULL  
TI Composition containing fibers, spherical particles and platelets, and its uses  
IN Chevalier, Veronique, Villecresnes, FRANCE  
Agostini, Albane, Verrieres Le Buisson, FRANCE  
PA L'OREAL, Paris, FRANCE (non-U.S. corporation)  
PI US 2002192250 A1 20021219  
AI US 2002-100907 A1 20020320 (10)  
PRAI FR 2001-3767 20010320  
DT Utility  
FS APPLICATION  
LREP OBLON SPIVAK MCCLELLAND MAIER & NEUSTADT PC, FOURTH FLOOR, 1755 JEFFERSON DAVIS HIGHWAY, ARLINGTON, VA, 22202  
CLMN Number of Claims: 30  
ECL Exemplary Claim: 1  
DRWN No Drawings  
AB The invention relates to a composition containing an oily phase dispersed in an aqueous phase, fibers, spherical particles and platelets. The composition has very good stability and applies very uniformly to the skin, with no phenomenon of pilling or of aggregation. It may especially constitute an oil-in-water emulsion that may be used as a cosmetic composition. The invention also relates to the use of the said composition especially to care for, treat, make up or cleanse the skin, the lips, the eyelashes and/or the hair.

SUMM BACKGROUND OF THE INVENTION

[0001] 1. Field of the Invention

[0002] The present invention relates to a composition comprising, preferably in a physiologically acceptable medium, an oily phase dispersed in an aqueous phase, fibers, spherical particles and platelets, and to the use of the composition, preferably to care for, treat and/or make up keratin materials such as body or facial skin, the hair, the eyelashes and/or the lips.

[0003] 2. Discussion of the Background

[0004] Document JP 07-196 440 discloses cosmetic compositions containing short polyamide fibers, the compositions allegedly having a velvety feel and good cosmetic staying power. However, the incorporation of the fibers, and in particular of these polyamide fibers, into dispersions comprising an oily phase dispersed in an aqueous phase, and in particular into oil-in-water (O/W) emulsions that are dispersions stabilized with emulsifiers, poses problems when applying the composition to keratin materials such as the skin, and especially when there is a large amount of fibers. Specifically, the fibers, especially when they are in a relatively large amount, have a tendency to aggregate in O/W emulsions containing them. Moreover, these emulsions containing fibers have a tendency to "pill" on the skin, that is to say to be applied in packets appearing as small balls on the skin.

OBJECT OF THE INVENTION

[0005] There is thus still a need for O/W dispersions, and especially O/W emulsions, containing fibers, and especially polyamide fibers, even in a large amount, which do not have the drawbacks of the prior art.

SUMMARY OF THE INVENTION

[0006] The inventors have discovered, unexpectedly, that combining fibers, spherical particles and platelets makes it possible to avoid the problems of pilling and of aggregation, believed to be caused by the fibers, and to prepare, e.g., oil-in-water emulsions containing fibers, which do not pose any problems when applied to the skin, even in the presence of a large amount of fibers.

DETD DETAILED DESCRIPTION OF THE INVENTION

[0007] The present invention relates to a composition comprising, preferably in a physiologically acceptable medium, an oily phase dispersed in an aqueous phase, fibers, spherical particles and platelets.

[0008] The expression "physiologically acceptable medium" means herein a medium that is compatible with keratin materials such as the skin, the lips, the scalp, the eyelashes, the eyes and/or the hair.

[0009] The dispersion may preferably be an O/W emulsion.

[0010] The composition of the invention makes it possible not only to prevent the fibers from aggregating, but also to facilitate the application of the composition containing them to keratin materials, and in particular to the skin. Thus, the composition according to the invention does not "pill" and therefore does not form small balls when applied to the skin. In addition, it disintegrates easily, that is to say that it can be easily applied and is deposited in a sufficient amount and in a uniform manner on the skin or the keratin material on which it is applied. This effect of combining platelets and spherical particles is found for any composition containing fibers, and is especially useful for dispersions.

[0011] A subject of the invention is also the cosmetic use the combination of platelets and spherical particles in a cosmetic composition containing fibers, to prevent the fibers from aggregating, to prevent the composition from pilling, and to facilitate the application (and the disintegration) of the composition to keratin materials and especially the skin.

[0012] In the present patent application, the expression "spherical particles" means particles having or substantially having the shape of a sphere, which are insoluble in the medium of the composition, even at the melting point of the medium (e.g., about 100.degree. C.).

[0013] In addition, the terms "platelets" and "leaflets" mean herein particles of parallelepipedal shape (rectangular or square surface area), discoid shape (circular surface area) or ellipsoid shape (oval surface area), characterized by three dimensions: a length, a width and a height, these particles being insoluble in the medium of the composition according to the invention, even at the melting point of the medium (e.g., about 100.degree. C.).

[0014] The composition of the invention may comprise one or more kinds of fiber, one or more kinds of spherical particle, and one or more kinds of platelet. Fibers

[0015] The fibers which may be used in the composition of the invention include hydrophilic or hydrophobic fibers, of natural or synthetic, mineral or organic origin.

[0016] These fibers may be short or long, individual or organized, for

example braided. They are generally of cylindrical shape, unlike the platelets, which are of parallelepipedal, etc. shape, or the spherical particles, which are of spherical shape. They may have any morphology and in particular may have a circular or polygonal (square, triangular, hexagonal or octagonal) cross section depending on the specific application envisaged. In particular, their ends may be blunted and/or polished to prevent injury.

[0017] The fibers may have a length (L) ranging from 1  $\mu\text{m}$  (0.001 mm) to 10 mm, preferably from 0.1  $\mu\text{m}$  to 5 mm and better still from 0.1 mm to 1.5 mm. Their cross section may be within a circle of diameter (D) ranging from 1 nm (0.001  $\mu\text{m}$ ) to 100  $\mu\text{m}$ , preferably ranging from 1 nm (0.001  $\mu\text{m}$ ) to 50  $\mu\text{m}$  and better still from 5  $\mu\text{m}$  to 40  $\mu\text{m}$ .

[0018] Preferably, the fibers used according to the present invention have a shape factor, i.e. a ratio L/D (length/diameter) ranging from 3.5 to 2,500, better still from 5 to 500 and even better still from 5 to 150.

[0019] The yarn count of fibers is often given in denier or decitex. The denier is the weight in grams for 9 km of yarn. The fibers used according to the invention preferably have a yarn count ranging from 0.15 to 30 denier and better still from 0.18 to 18 denier.

[0020] The shape factor, the yarn count and the morphology of the fibers are the three factors that are important for defining a fiber.

[0021] The fibers may be those used in the manufacture of textiles and in particular silk, cotton, wool or flax fibers, cellulose fibers extracted in particular from wood, plants or algae, polyamide (Nylon.RTM. fibers, modified cellulose (rayon, viscose or acetate, in particular rayon acetate) fibers, poly-p-phenyleneterephthalamide fibers, in particular Kevlar.RTM. fibers, acrylic fibers, in particular polymethyl methacrylate or poly(2-hydroxyethyl methacrylate) fibers, polyolefin fibers and in particular polyethylene or polypropylene fibers, glass, silica or aramid fibers, carbon fibers, in particular in the form of graphite, Teflon fibers, insoluble collagen fibers, polyester, polyvinyl chloride, polyvinylidene chloride, polyvinyl alcohol, polyacrylonitrile, chitosan, polyurethane or polyethylene phthalate fibers, and fibers formed from a mixture of polymers such as those mentioned above, for instance polyamide/polyester fibers.

[0022] Examples of polyurethane fibers include poly(urethane-urea) polymer fibers, belonging to the elastane class, and especially those sold under the name Lycrag by the company DuPont.

[0023] Resorbable synthetic fibers used in surgery may also be used, for instance the fibers prepared from glycolic acid and from caprolactone (Monocryl from the company Johnson & Johnson); resorbable synthetic fibers such as the copolymer of lactic acid and of glycolic acid (Vicryl from the company Johnson & Johnson); terephthalic polyester fibers (Ethibond from the company Johnson & Johnson) and stainless steel yams (Acier from the company Johnson & Johnson).

[0024] Mixtures of fibers may also be used.

[0025] Moreover, the fibers may or may not be surface-treated and may be coated or uncoated. They may especially be coated and/or functionalized fibers, the term "functionalized" meaning that the fibers are surface-treated so as to modify their properties.

[0026] Coated fibers which may be used in the invention include

polyamide fibers coated with copper sulphide for an antistatic effect (for example R-STAT from the company Rhodia) or another polymer allowing a particular organization of the fibers (specific surface treatment) or a surface treatment which induces colour/hologram effects (for example Lurex fiber from the company Sildorex).

[0027] The fibers can also be functionalized, that is to say be modified so as to have a specific function. This functionalization of the fibers can be carried out both on the fibers and in the fibers and by any method which makes it possible to attach a compound to the fibers or to trap it within the cavities formed by the geometry of the fibers. Mention may be made, as methods, of, for example, coating the fibers with an active principle; fixing, to the fibers, particles enclosing an active principle, such as nanocapsules or nanospheres; adsorption in the fibers; or fixing by chemical reaction. It is thus possible to use fibers having specific functional purposes, for example fibers which are stabilized against UV radiation by modification with chemical or physical sunscreens; fibers which have been rendered bactericidal or antiseptic by modification with preservatives or antibacterials; fibers which have been coloured by modification with colouring molecules; fibers which have been rendered keratolytic or desquamating by modification with keratolytic or desquamating agents; fibers which have been rendered hydrating by modification with hydrating agents or water-retaining polymers; fibers which have been rendered fragrant by modification with a fragrance; fibers which have been rendered analgesic or soothing by modification with an antiinflammatory or a soothing agent; or fibers which have been rendered resistant to perspiration by modification with an antiperspirant

[0028] According to their properties, the fibers used according to the present invention may be introduced into an aqueous medium, an oily medium or into a powder.

[0029] The fibers which may be used according to the invention are preferably chosen from polyamide fibers, poly-p-phenyleneterephthalamide fibers and cotton fibers, and mixtures thereof. Their length may preferably range from 0.1 to 10 mm and preferably from 0.1 to 1 mm, their mean diameter may range from 5 to 50  $\mu\text{m}$  and the shape factor preferably ranges from 5 to 150.

[0030] In particular, the polyamide fibers sold by Etablissements P. Bonte under the name Polyamide 0.9 dtex 0.3 mm, having a mean diameter of from 15 to 20  $\mu\text{m}$ , a yarn count of about 0.9 dtex (0.81 denier) and a length ranging from 0.3 mm to 1.5 mm, may be used. Poly-p-phenyleneterephthalamide fibers with a mean diameter of 12  $\mu\text{m}$  and a length of about 1.5 mm may also be used, such as those sold under the name Kevlar Floc by the company Du Pont Fibers. These polyamide fibers are preferably introduced into an oily medium or introduced via a dry route into a powder.

[0031] Cotton fibers with a mean diameter of 20  $\mu\text{m}$ , a length of 0.3 mm and a shape factor of 15 may also be used, such as those sold by the company Filature de Lomme, by the company Textiles des Dunes, by the Institut Textile de France or by the company Velifil.

[0032] The fibers may be present in the composition according to the invention in an amount ranging, for example, from 0.1% to 50% by weight, preferably from 0.5% to 30% by weight, better still from 1% to 20% by weight and even better from 2% to 15% by weight relative to the total weight of the composition, including 4, 5, 7, 9, 10, 12 and 14%.

Spherical Particles

[0033] The spherical particles according to the invention have or substantially have the shape of a sphere and may be hollow or solid. Advantageously, the particles of the invention have a particle size (number-average diameter) ranging from 0.1  $\mu\text{m}$  to 250  $\mu\text{m}$ , better still from 1  $\mu\text{m}$  to 150  $\mu\text{m}$  and even better from 10  $\mu\text{m}$  to 100  $\mu\text{m}$ , including 20, 30, 40, 50, 60, 70, 80 and 90  $\mu\text{m}$ .

[0034] Useful spherical particles include organic and mineral microspheres. As non-limiting examples of spherical particles that may be used in the composition of the invention, mention may be made, for example, of silica powder; polyamide particles and especially Nylon 12, for instance the product sold under the name Orgasol by the company Atochem; polyethylene powders; microspheres based on acrylic copolymers, such as those made of ethylene glycol dimethacrylate/lauryl methacrylate copolymer sold by the company Dow Corning under the name Polytrap; expanded powders such as hollow microspheres, and especially the microspheres sold under the name Expancel by the company Kemanord Plast or under the name Micropearl F 80 ED by the company Matsumoto; powders of natural organic materials such as corn starch, wheat starch or rice starch, that may or may not be crosslinked, such as the starch powders crosslinked with octenylsuccinate anhydride, sold under the name Dry-Flo by the company National Starch; silicone resin microbeads such as those sold under the name Tospearl by the company Toshiba Silicone; and mixtures thereof.

[0035] The spherical particles of the invention may be present in amounts ranging, for example, from 0.1% to 30% by weight, preferably from 0.5% to 25% by weight and better still from 1% to 10% by weight relative to the total weight of the composition, including 2, 4, 6 and 8%.

#### Platelets

[0036] As mentioned above, the platelets are particles of parallelepipedal shape (rectangular or square surface area), discoid shape (circular surface area) or ellipsoid shape (oval surface area), characterized by three dimensions: a length, a width and a height. When the shape is circular, the length and width are identical and correspond to the diameter of a disc, whereas the height corresponds to the thickness of the disc. When the surface area is oval, the length and width correspond, respectively, to the major axis and the minor axis of an ellipse and the height corresponds to the thickness of the elliptical disc formed by the platelet. When it is a parallelepiped, the length and width may be of identical or different sizes: when they are of the same size, the shape of the surface area of the parallelepiped is square; in the contrary case, the shape is rectangular. As regards the height, it corresponds to the thickness of the parallelepiped.

[0037] The length of the platelets used according to the invention preferably ranges from 0.01 to 100  $\mu\text{m}$ , better still from 0.1 to 50  $\mu\text{m}$  and even better from 1 to 50  $\mu\text{m}$ , including 10, 20, 30 and 40  $\mu\text{m}$ . The width of these platelets preferably ranges from 0.01 to 100  $\mu\text{m}$ , better still from 0.1 to 50  $\mu\text{m}$  and even better from 1 to 10  $\mu\text{m}$ , including 3, 4, 6 and 8  $\mu\text{m}$ . The height (thickness) of these platelets preferably ranges from 0.1 nm to 1  $\mu\text{m}$  (0.1 to 1,000 nm), better still from 1 nm to 600 nm and even better from 1 nm to 500 nm, including 25, 50, 100, 200, 300, and 400 nm.

[0038] Examples of platelets that may be used in the composition of the invention include mineral and organic pigments, lamellar silicates, and mixtures thereof. The term "pigments" should be understood as meaning

white or coloured, mineral or organic particles, which are insoluble in the medium of the composition, and which are intended to colour and/or opacify the composition.

[0039] Mineral pigments that may be used in the invention include titanium oxide, zirconium oxide or cerium oxide, and also zinc oxide, iron oxide or chromium oxide, and ferric blue, and mixtures thereof. Organic pigments that may be used in the invention include carbon black and barium, strontium, calcium and aluminium lakes, and mixtures thereof.

[0040] Lamellar silicates include clays, talcs, micas and nacres, and mixtures thereof.

[0041] The clays are mixed silicates of natural or synthetic origin containing several (two or more) types of cation chosen from alkali metals (for example Na, Li or K) or alkaline-earth metals (for example Be, Mg or Ca), transition metals and aluminium.

[0042] Clays that may be used in the invention include, for example, sodium magnesium silicate, clays of the kaolin family, such as kaolin or kaolinite, dickite and nacrite; clays of the halloysite, dombassite, antigorite, bentonite or pyrophyllite family; montmorillonites; beidellite; vermiculites; stevensite; hectorites; saponites; chlorites; sepiolite; smectite, and also these clays chemically modified, for example, with acrylic acids, polysaccharides (for example carboxymethylcellulose) or organic cations, and mixtures thereof.

[0043] The talcs are hydrated magnesium silicates usually comprising aluminium silicate. The crystal structure of talc consists of repeated layers of a sandwich of brucite between layers of silica.

[0044] The micas are aluminium silicates optionally comprising iron and/or alkali metals. They have the property of being able to divide into thin layers (about 1  $\mu\text{m}$ ). They generally range in size from 5 to 150  $\mu\text{m}$ , preferably from 10 to 100  $\mu\text{m}$  and better still from 10 to 60  $\mu\text{m}$  for the largest size (length), and a height (thickness) of from 0.1 to 0.5  $\mu\text{m}$ . The micas include phlogopite, muscovite, fluorophlogopite and vermiculite, and mixtures thereof. Mention may also be made of micaceous clays such as illite.

[0045] The "nacres" should be understood as meaning iridescent particles, produced especially by certain molluscs in their shell or else synthesized, which serve to modify the texture of the composition and also the matt/gloss effect. Nacres are generally micas that are surface-treated to obtain this iridescent effect. Nacres that may be used in the invention include, for example, micas coated with titanium oxide, with iron oxide, with natural pigment and/or with bismuth oxychloride, such as coloured or uncoloured titanium oxide-mica (or titanium-mica), and mixtures thereof.

[0046] According to one particularly preferred embodiment of the present invention, the platelets are chosen from sodium magnesium silicate; kaolin and kaolinite; montmorillonites; hectorites; talcs; micas; nacres, and mixtures thereof. Advantageously, the platelet used more particularly in the composition of the invention is kaolin, such as the product sold under the name Coslin C-100 by the company Engelhard; talc, such as those sold under the names Rose Talc and Talc SG-2000 by the company Nippon Talc; mica, such as those sold under the names Mica M RP and Silk Mica by the company Merck; titanium micas, such as mica-titanium oxide-brown iron oxide (CTFA: Mica/Iron oxides/Titanium oxide) sold under the name Cloisonne Rouge Flambe 440 X by the company

Engelhard; or a modified hectorite such as, for example, a bentone and more particularly the mixture "cyclomethicone, Quaternium-18-hectorite, SD alcohol 40" (85/10/5) (CTFA name) sold under the name Bentone Gel VS-5 by the company Rheox.

[0047] The amount of platelets may range, for example, from 0.1% to 30% by weight, preferably from 0.25% to 25% by weight and better still from 0.5% to 10% by weight relative to the total weight of the composition, including 1, 3, 5, 7 and 9%.

#### Oily Phase

[0048] The oily phase of the composition according to the invention is not limited, and may generally represent from 10% to 50% by weight and preferably from 15% to 30% by weight relative to the total weight of the composition.

[0049] The oily phase usually contains at least one oil. Examples of oils that may be used in the composition of the invention include:

[0050] hydrocarbon-based oils of animal origin, such as perhydosqualene;

[0051] hydrocarbon-based oils of plant origin, such as liquid triglycerides of fatty acids containing from 4 to 10 carbon atoms, for instance heptanoic or octanoic acid triglyceride or alternatively, for example, sunflower oil, corn oil, soybean oil, marrow oil, grapeseed oil, sesame oil, hazelnut oil, apricot oil, macadamia oil, arara oil, sunflower oil, castor oil, avocado oil, caprylic/capric acid triglycerides for instance those sold by the company Stearineries Dubois or those sold under the names Miglyol 810, 812 and 818 by the company Dynamit Nobel, jojoba oil or karite butter oil;

[0052] synthetic esters and synthetic ethers, especially of fatty acids, for instance oils of formulae  $R^{sup.1}COOR^{sup.2}$  and  $R^{sup.1}OR^{sup.2}$  in which  $R^{sup.1}$  represents a fatty acid residue containing from 8 to 29 carbon atoms and  $R^{sup.2}$  represents a branched or unbranched hydrocarbon-based chain containing from 3 to 30 carbon atoms, such as, for example, purcellin oil, isononyl isononanoate, isopropyl myristate, 2-ethylhexyl palmitate, 2-octyldodecyl stearate, 2-octyldodecyl erucate or isostearyl isostearate; hydroxylated esters such as isostearyl lactate, octyl hydroxystearate, octyldodecyl hydroxystearate, diisostearyl malate, triisocetyl citrate and fatty alkyl heptanoates, octanoates and decanoates; polyol esters, for instance propylene glycol dioctanoate, neopentyl glycol diheptanoate and diethylene glycol diisononanoate; and pentaerythritol esters, for instance pentaerythrityl tetraisostearate;

[0053] linear or branched hydrocarbons of mineral or synthetic origin, such as volatile or non-volatile liquid paraffins, and derivatives thereof, petroleum jelly, polydecenes, and hydrogenated polyisobutene such as Parleam.RTM. oil;

[0054] fatty alcohols containing from 8 to 26 carbon atoms, for instance cetyl alcohol, stearyl alcohol and a mixture thereof (cetylstearyl alcohol), octyldodecanol, 2-butyloctanol, 2-hexyldecanol, 2-undecylpentadecanol, oleyl alcohol or linoleyl alcohol; -alkoylated and especially ethoxylated fatty alcohols such as oleth-12;

[0055] partially hydrocarbon-based and/or silicone-based fluoro oils, for instance those described in document JP-A-2 295 912. Examples of fluoro oils which may also be mentioned include

perfluoromethylcyclopentane and perfluoro-1,3-dimethylcyclohexane, sold under the names "Flutes PC1.RTM." and "Flutes PC3.RTM." by the company BNFL Fluorochemicals; perfluoro-1,2-dimethylcyclobutane; perfluoroalkanes such as dodecafluoropentane and tetradecafluorohexane, sold under the names "PF 5050.RTM." and "PF 5060.RTM." by the company 3M, or alternatively bromoperfluorooctyl sold under the name "Foralkyl.RTM." by the company Atochem; nonafluoromethoxybutane sold under the name "MSX 451 8.RTM." by the company 3M and nonafluoroethoxyisobutane; perfluoromorpholine derivatives, such as the 4-trifluoromethylperfluoromorpholine sold under the name "PF 5052.RTM." by the company 3M; -silicone oils, for instance volatile or non-volatile polymethylsiloxanes (PDMSs) containing a linear or cyclic silicone chain, that are liquid or pasty at room temperature, especially cyclopolydimethylsiloxanes (cyclomethicones) such as cyclohexasiloxane; polydimethylsiloxanes comprising alkyl, alkoxy or phenyl groups, that are pendent or at the end of a silicone chain, these groups containing from 2 to 24 carbon atoms; phenylsilicones, for instance phenyltrimethicones, phenyldimethicones, phenyltrimethylsiloxydiphenylsiloxanes, diphenyldimethicones, diphenylmethylphenyltrisiloxanes, 2-phenylethyltrimethylsiloxy silicates and polymethylphenylsiloxanes;

[0056] mixtures thereof.

[0057] In the list of oils mentioned above, the expression "hydrocarbon-based oil" means any oil mainly comprising carbon and hydrogen atoms, and optionally ester, ether, fluoro, carboxylic acid and/or alcohol groups.

[0058] Other fatty substances that may be present in the oily phase. For example, fatty acids containing from 8 to 30 carbon atoms, for instance stearic acid, lauric acid, palmitic acid and oleic acid; waxes, for instance lanolin, beeswax, carnauba wax or candelilla wax, paraffin wax, lignite wax or microcrystalline waxes, ceresin or ozokerite, synthetic waxes such as polyethylene waxes, Fischer-Tropsch waxes; gums such as silicone gums (dimethiconol); silicone resins such as trifluoromethyl-C1-4-alkyldimethicone and trifluoropropyl dimethicone; and silicone elastomers, for instance the products sold under the names "KSG" by the company Shin-Etsu, under the names "Trefil", "BY29" or "EPSX" by the company Dow Corning or under the names "Gransil" by the company Grant Industries.

[0059] These fatty substances may be chosen in a varied manner by a person skilled in the art so as to prepare a composition having the desired properties, for example in terms of consistency or texture, in view of this disclosure.

#### Aqueous Phase

[0060] The aqueous phase of the composition of the invention generally constitutes from 30% to 85% and preferably from 60% to 75% by weight relative to the total weight of the composition, including 65 and 70%. Water is usually the main component of the aqueous phase, the aqueous phase possibly containing other aqueous soluble components, etc.

#### Additives

[0061] The composition according to the invention may especially constitute an oil-in-water emulsion. In this case, it preferably contains at least one emulsifier chosen from those conventionally used for the preparation of O/W emulsions.

[0062] Useful emulsifiers include nonionic surfactants, and especially



esters of polyols and of fatty acids containing a saturated or unsaturated chain containing, for example, from 8 to 24 carbon atoms and better still from 12 to 22 carbon atoms, and oxyalkylenated derivatives thereof, that is to say derivatives comprising oxyethylene and/or oxypropylene units, such as glyceryl esters of C.sub.8-C.sub.24 fatty acids, and oxyalkylenated derivatives thereof; polyethylene glycol esters of C.sub.8-C.sub.24 fatty acids, and oxyalkylenated derivatives thereof; sorbitol esters of C.sub.8-C.sub.24 fatty acids, and oxyalkylenated derivatives thereof, sugar (sucrose, glucose or alkylglucose) esters of C.sub.8-C.sub.24 fatty acids, and oxyalkylenated derivatives thereof; and mixtures thereof.

[0063] Glyceryl esters of fatty acids that may especially be mentioned include glyceryl stearate (glyceryl mono-, di- and/or tristearate) or glyceryl ricinoleate, and mixtures thereof.

[0064] Polyethylene glycol esters of fatty acids that may especially be mentioned include polyethylene glycol stearate (polyethylene glycol mono-, di- and/or tristearate), and more especially polyethylene glycol 50 EO monostearate (CTFA name: PEG-50 stearate), and mixtures thereof.

[0065] Fatty acid esters of glucose or of alkylglucose that may be mentioned in particular include glucose palmitate, alkyl glucose sesquistearamates, for instance methylglucose sesquistearamate, alkylglucose palmitates, for instance methylglucose palmitate or ethylglucose palmitate, methylglucoside fatty esters and more especially the diester of methylglucoside and of oleic acid (CTFA name: methyl glucose dioleate); the mixed ester of methylglucoside and of the oleic acid/hydroxystearic acid mixture (CTFA name: methyl glucose dioleate/hydroxystearate); the ester of methylglucoside and of isostearic acid (CTFA name: methyl glucose isostearate); the ester of methylglucoside and of lauric acid (CTFA name: methyl glucose laurate); the mixture of methylglucoside monoester and diester and of isostearic acid (CTFA name: methyl glucose sesqui-isostearate); the mixture of methylglucoside monoester and diester and of stearic acid (CTFA name: methyl glucose sesquistearamate) and in particular the product sold under the name Glucate SS by the company Amerchol, and mixtures thereof.

[0066] Useful oxyethylenated ethers of fatty acid and of glucose or of alkylglucose include oxyethylenated ethers of fatty acids and of methylglucose, and in particular the polyethylene glycol ether of the diester of methylglucose and of stearic acid containing about 20 mol of ethylene oxide (CTFA name: PEG-20 methyl glucose distearate), such as the product sold under the name Glucam E-20 distearate by the company Amerchol; the polyethylene glycol ether of the mixture of methyl glucose monoester and diester and of stearic acid containing about 20 mol of ethylene oxide (CTFA name: PEG-20 methyl glucose sesquistearamate) and in particular the product sold under the name Glucamate SSE-20 by the company Amerchol and the product sold under the name Grillocoese PSE-20 by the company Goldschmidt, and mixtures thereof.

[0067] Useful sucrose esters include sucrose palmitostearate, sucrose stearate and sucrose monolaurate.

[0068] Depending on their nature, these emulsifiers are introduced into the aqueous phase or into the oily phase. There may also be an emulsifier in the aqueous phase and another emulsifier in the oily phase. Such is within the skill of the ordinary artisan in view of this disclosure.

[0069] According to one particular embodiment of the invention, the emulsifiers) is (are) chosen from nonionic surfactants, and especially

polyol esters of fatty acids and oxyethylenated derivatives thereof, and more particularly glucose or alkylglucose esters of fatty acids and oxyethylenated derivatives thereof, and mixtures thereof.

[0070] The amount of emulsifiers may range, for example, from 0.1% to 15% by weight, preferably from 0.5% to 10% by weight and better still from 1% to 8% by weight relative to the total weight of the composition.

[0071] The compositions of the invention may contain adjuvants that are common in the fields under consideration, such as hydrophilic or lipophilic active agents, preserving agents, gelling agents, antioxidants, fragrances, solvents, screening agents, soluble dyes, basic or acidic agents and also lipid vesicles. These adjuvants can be used in the usual proportions, for example in the field of cosmetics, and, for example, from 0.01% to 30% of the total weight of the emulsion, and, depending on their nature, they are introduced into the aqueous phase or into the oily phase of the emulsion, or alternatively into vesicles. These adjuvants and their concentrations should be such that they do not modify the desired property for the emulsion of the invention, all of which is within the skill of the ordinary artisan in view of this disclosure.

[0072] Useful active agents include moisturizers such as polyols, for instance glycerol and sorbitol; keratolytic agents; depigmenting agents; slimming agents and any active agent that is suitable for the final aim of the composition.

[0073] Depending on the desired fluidity of the composition, one or more hydrophilic or lipophilic gelling agents may be added thereto. Examples of hydrophilic gelling agents include carboxyvinyl polymers, such as carbomers; polyacrylamides and polymers and copolymers of 2-acrylamido-2-methylpropanesulphonic acid, that are optionally crosslinked and/or neutralized, for instance poly(2-acrylamido-2-methylpropane sulphonic acid) sold by the company Hoechst under the trade name "Hostacerin AMPS" (CTFA name: ammonium polyacryldimethyltauramide).

[0074] Useful lipophilic gelling agents include modified clays such as bentones, such as the mixture "cyclomethicone, Quaternium-18 hectorite, SD alcohol 40" (10/85/5) (CTFA name) sold under the name Bentone Gel VS-5 by the company Rheox; crosslinked elastomeric organopolysiloxanes such as those sold under the names KSG6 from Shin-Etsu, Trefil E-505C or Trefil E-506C from Dow Corning, Gransil from Grant Industries (SR-CYC, SR DMF10 or SR-DC556), or those sold in the form of gels: KSG15, KSG17, KSG16 and KSG18 from Shin-Etsu, Gransil SR 5CYC gel, Gransil SR DMF 10 gel, Gransil SR DC 556 gel and SF 1204 and JK 113 from General Electric.

[0075] When they are present, these gelling agents may generally be used at concentrations ranging from 0.1% to 7% and preferably from 0.1% to 5% by weight of active material relative to the total weight of the composition.

[0076] The compositions that are the subject of the invention find their application in a large number of treatments, especially cosmetic or dermatological treatments, and they may thus constitute a cosmetic composition, especially for treating, protecting, caring for, removing make-up from and/or cleansing the skin, the lips and/or the hair, and/or for making up the skin of the lips, the eyelashes and the body.

[0077] The compositions according to the invention may be used, for example, as care, make-up-removing and/or cleansing products for the face in the form of creams or milks, or as make-up products (for the

skin, eyelashes and lips) by incorporation of pigments or colorants, for example as foundations.

[0078] Thus, a subject of the invention is the cosmetic use of the composition as defined above for treating, protecting, caring for, removing make-up from and/or cleansing the skin, the lips and/or the hair, and/or for making up the skin, the lips, the eyelashes and/or the body.

[0079] A subject of the invention is also a cosmetic process for treating the skin, including the scalp, the hair, the eyelashes and/or the lips, characterized in that a composition as defined above is applied to the skin, the hair, the eyelashes and/or the lips.

[0080] The examples which follow will make it possible to understand the invention more clearly, without, however, being limiting in nature. The amounts indicated are in percentages by weight, except where otherwise mentioned.

[0081] The example according to the invention was compared in a test on a panel of 12 users with an identical composition but not containing either the platelets (comparative example 1), or the spherical particles (comparative example 2). The application was performed comparatively by half-face application, the composition of the invention being applied to one half of the face, while one of the comparative examples was applied to the other half of the face.

Composition	Example 1 according to the invention	Comparative Example 1	Comparative Example 2
Phase A1			
Methyl glucose sesquistearate (Glucate SS)	2%	2%	2%
Stearyl alcohol/ cetareth-20	2%	2%	2%
Preserving agents	0.1%	0.1%	0.1%
2-Octyldodecanol	4%	4%	4%
Phase A2			
Cyclopentasiloxane	5%	5%	5%
Phase B1			
Glycerol	3%	3%	3%
Sodium magnesium silicate (clay) (platelets)	0.5%	--	0.5%
Demineralized water	qs 100%	qs 100%	qs 100%
Preserving agents	0.25%	0.25%	0.25%
Phase B2			
PEG-20 methyl glucose sesqui- stearate (Glucamate SSE 20)	3%	3%	3%
Demineralized water	19%	19%	19%
Phase C			
Nylon-12 (Orgasol) (spherical particles)	2%	2%	--
Polyamide fibers (Nylon-6,6) (Polyamide	10%	10%	10%

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0.9 Dtex, 0.3 mm-  
Paul Bonte Company)

Phase D

Ammonium	0.2%	0.2%	0.2%
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polyacryloyl-  
dimethyltaurate

(Hostacerin AMPS  
from Clariant)

Quality of the composition obtained	creamy, fine and soft easy to apply uniform deposit	fluid, slides over the fingers pilling of the composition application	creamy and fine. Compared with Ex. 1: fibers more persistent on the skin, more difficult to apply, less uniform deposit
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Procedure: Phases A1 and A2 are heated separately (about 70.degree. C.) with stirring and then mixed together. Similarly, phases B1 and B2 are heated separately (about 70.degree. C.) with stirring and then mixed together. The mixture of B1 and B2 is then poured into the mixture of A1 and A2 with stirring. Phase D is then added and the resulting mixture is homogenized.

[0082] The three compositions have a white fibrous texture. The test demonstrates the advantage of the composition according to the invention, which does not pill when applied to the skin and gives a more uniform and easier deposit than the compositions of the comparative examples.

[0083] French Patent Application 0103767 filed Mar. 20, 2001 is incorporated herein by reference, as are all documents, publications, articles, standards, and patents referred to above.

[0084] Whenever a number range is disclosed all values and subranges between stated values are included as if specifically written out.

[0085] The use of the invention composition is within the skill of the ordinary artisan in view of this disclosure, and depends in part on its ingredients and the desired effect. For example, a user can apply 0.1-5 g of composition to keratin material such as skin once or more daily, optionally over a long term.

[0086] Obviously, numerous modifications and variations of the present invention are possible in light of the above teachings. It is therefore to be understood that within the scope of the appended claims, the invention may be practiced otherwise than as specifically described herein.

CLM What is claimed is:

1. A composition comprising an oily phase dispersed in an aqueous phase, fibers, spherical particles, and platelets.

2. The composition according to claim 1, wherein the fibers have a length (L) ranging from 1 .mu.m to 10 mm.

3. The composition according to claim 1, wherein the fibers have a cross section that is within a circle of diameter (D) ranging from 1 nm to 100 .mu.m.

4. The composition according to claim 1, wherein the fibers have a shape

factor (L/D) ranging from 5 to 150.

5. The composition according to claim 1, wherein the fibers have a yarn count ranging from 0.15 to 30 denier.

6. The composition according to claim 1, wherein said fibers are selected from the group consisting of silk, cotton, wool, flax, wood, polyamide, modified cellulose, poly-p-phenyleneterephthalamide, acrylic, polyolefin, glass, silica, aramid, carbon, Teflon, insoluble collagen, polyester, polyvinyl chloride, polyvinylidene chloride, polyvinyl alcohol, polyacrylonitrile, chitosan, polyurethane, polyethylene phthalate, and fibers of a mixture of polymers.

7. The composition according to claim 1, wherein said fibers are coated, functionalized, or coated and functionalized.

8. The composition according to claim 1, wherein said fibers are made of a material selected from the group consisting of polyamide, poly-p-phenyleneterephthalamide, and cotton.

9. The composition according to claim 1, wherein the fibers are present in an amount ranging from 0.1% to 50% by weight relative to the total weight of the composition.

10. The composition according to claim 1, wherein the spherical particles are organic or mineral microspheres.

11. The composition according to claim 1, wherein spherical particles have a particle size ranging from 0.1  $\mu\text{m}$  to 250  $\mu\text{m}$ .

12. The composition according to claim 1, wherein the spherical particles are selected from the group consisting of silica powder; polyamide particles; polyethylene powders; acrylic copolymer microspheres; expanded powders; powders of natural organic materials; silicone resin microbeads; and mixtures thereof.

13. The composition according to claim 1, wherein the spherical particles are present in an amount ranging from 0.1% to 30% by weight relative to the total weight of the composition.

14. The composition according to claim 1, wherein the platelets have a length ranging from 0.01 to 100  $\mu\text{m}$ , a width of from 0.01 to 100  $\mu\text{m}$  and a height ranging from 0.1 to 1,000 nm.

15. The composition according to claim 1, wherein the platelets are selected from the group consisting of mineral or organic pigments, lamellar silicates, and mixtures thereof.

16. The composition according to claim 1, wherein the platelets are selected from the group consisting of titanium oxide, zirconium oxide or cerium oxide, zinc oxide, iron oxide or chromium oxide, ferric blue, carbon black and barium, strontium, calcium, and aluminium lakes, and mixtures thereof.

17. The composition according to claim 1, wherein the platelets are selected from the group consisting of clays, talcs, micas, nacres, and mixtures thereof.

18. The composition according to claim 1, wherein the platelets are selected from the group consisting of sodium magnesium silicate; kaolin, hectorites, talcs, micas, micas coated with titanium oxide, micas coated with iron oxide, micas coated with natural pigment, micas coated with

bismuth oxychloride, and mixtures thereof.

19. The composition according to claim 1, wherein the platelets are present in an amount ranging from 0.1% to 30% by weight relative to the total weight of the composition.

20. The composition according to claim 1, wherein the oily phase represents from 10% to 50% by weight relative to the total weight of the composition.

21. The composition according to claim 1, wherein said composition is an oil-in-water emulsion.

22. The composition according to claim 21, further comprising at least one nonionic surfactant emulsifier.

23. The composition according to claim 22, wherein the nonionic surfactant is a polyol ester of a fatty acid containing a saturated or unsaturated chain containing from 8 to 24 carbon atoms or an oxyalkylenated derivative thereof.

24. The composition according to claim 22, wherein the nonionic surfactant is a fatty acid ester of glucose or of alkylglucose, or an oxyethylenated derivative thereof.

25. The composition according to claim 22, wherein the amount of emulsifier ranges from 0.1% to 15% by weight relative to the total weight of the composition.

26. The composition according to claim 1, wherein said composition is a cosmetic composition.

27. The composition of claim 1, wherein: the fibers have a length (L) ranging from 1 .mu.m to 10 mm, the fibers have a cross section that is within a circle of diameter (D) ranging from 1 nm to 100 .mu.m, the fibers have a shape factor (L/D) ranging from 5 to 150, the fibers have a yarn count ranging from 0.15 to 30 denier, the fibers are present in an amount ranging from 1% to 20% by weight relative to the total weight of the composition, the spherical particles are organic or mineral microspheres, the spherical particles have a particle size ranging from 0.1 .mu.m to 250 .mu.m, the spherical particles are present in an amount ranging from 0.5% to 25% by weight relative to the total weight of the composition, the platelets have a length ranging from 0.01 to 100 .mu.m, a width of from 0.01 to 100 .mu.m and a height ranging from 0.1 to 1,000 nm, the platelets are present in an amount ranging from 0.25% to 25% by weight relative to the total weight of the composition, the oily phase represents from 15% to 30% by weight relative to the total weight of the composition, and the composition is an oil-in-water emulsion.

28. A process for treating the skin, the hair, the eyelashes and/or the lips, comprising applying the composition of claim 26 to the skin, the hair, the eyelashes, and/or the lips.

29. A process for treating the skin, the hair, the eyelashes and/or the lips, comprising applying the composition of claim 27 to the skin, the hair, the eyelashes, and/or the lips.

30. The composition according to claim 1, further comprising a physiologically acceptable medium.

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NCL NCLM: 424/401.000

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CAS INDEXING IS AVAILABLE FOR THIS PATENT.